This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

As rescanning documents *will not* correct images, please do not report the images to the Image Problem Mailbox.

For Dr Laval please

Access DB# 86065

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Donna Jagoe Examiner #: 77149 Date: 2/5/03
Art Unit: 1614 Phone Number 30 6-5826 Serial Number: 09/864,920
Mail Box and Bldg/Room Location: 2D01/ Rm # 2D09 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

****

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Novel Treatment for Cough

Inventors (please provide full names): Piomelli, Daniele

Jan Delaval
~~Reference Librarian~~
Biotechnology & Chemical Library
CM1 1E07 - 703-308-4498
jan.delaval@uspto.gov

Earliest Priority Filing Date: 5/23/00

**For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

See enclosed Claims 1-16 + 19-32.

Cough.

****

STAFF USE ONLY

	Type of Search	Vendors and cost where applicable
Searcher: AM	NA Sequence (#)	STN ✓
Searcher Phone #: 4494	AA Sequence (#)	Dialog
Searcher Location:	Structure (#) ✓	Questel/Orbit
Date Searcher Picked Up: 2/13/03	Bibliographic	Dr.Link
Date Completed: 2/13/03	Litigation	Lexis/Nexis
Searcher Prep & Review Time:	Fulltext	Sequence Systems
Clerical Prep Time: 120	Patent Family	WWW/Internet
Online Time: + 207	Other	Other (specify)

PTO-1590 (8-01)

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name Jason Examiner #: 77149 Date: 12/3
Art Unit 1614 Phone Number 306-5826 Serial Number: 09/864920
Mail Box and Bldg/Room Location 2009 2001 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

****

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention _____

Inventors (please provide full names) _____

_____

Earliest Priority Filing Date _____

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

****

STAFF USE ONLY

Searcher: Jan
Searcher Phone #: 4498
Searcher Location: _____
Date Searcher Picked Up: 12/9
Date Completed: 12/4
Searcher Prep & Review Time: _____
Clerical Prep Time: 45
Online Time: +10

Type of Search

NA Sequence (#) _____
AA Sequence (#) _____
Structure (#) ✓
Bibliographic _____
Litigation _____
Fulltext _____
Patent Family _____
Other _____

Vendors and cost where applicable

STN _____
Dialog _____
Questel/Orbit _____
Dr. Link _____
Lexis/Nexis _____
Sequence Systems _____
WWW/Internet _____
Other (specify) _____

STIC Search Report
Biotech-Chem Library

STIC Database Tracking Number: 109580

TO: Donna Jagoe **Location: 2d09 / 2d01** **Thursday, December 11, 2003** **Art Unit: 1614** **Phone: 306-5826** **Serial Number: 09 / 864920**	**From: Jan Delaval** **Location: Biotech-Chem Library** **CM1-1E07** **Phone: 308-4498** **jan.delaval@uspto.gov**

Search Notes

Claim still not searchable. Used search species

=> fil reg
FILE 'REGISTRY' ENTERED AT 15:37:38 ON 11 DEC 2003
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2003 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 10 DEC 2003 HIGHEST RN 625425-12-9
DICTIONARY FILE UPDATES: 10 DEC 2003 HIGHEST RN 625425-12-9

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2003

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

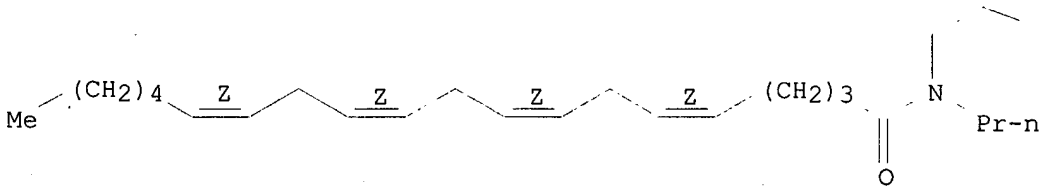
Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

=> d ide can tot l77

L77 ANSWER 1 OF 7 REGISTRY COPYRIGHT 2003 ACS on STN
RN **187223-90-1** REGISTRY
CN 5,8,11,14-Eicosatetraenamide, N-(2-hydroxyethyl)-N-propyl-, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 5,8,11,14-Eicosatetraenamide, N-(2-hydroxyethyl)-N-propyl-, (all-Z)-
FS STEREOSEARCH
MF C25 H43 N O2
SR CA
LC STN Files: CA, CAPLUS, USPATFULL

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

OH

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

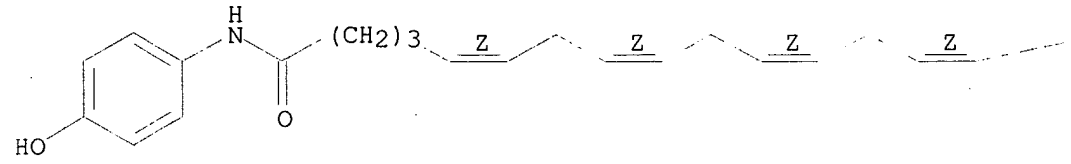
REFERENCE 1: 136:648

REFERENCE 2: 126:166092

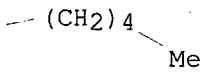
L77 ANSWER 2 OF 7 REGISTRY COPYRIGHT 2003 ACS on STN
RN **183718-77-6** REGISTRY
CN 5,8,11,14-Eicosatetraenamide, N-(4-hydroxyphenyl)-, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 5,8,11,14-Eicosatetraenamide, N-(4-hydroxyphenyl)-, (all-Z)-
OTHER NAMES:
CN AM 404
FS STEREOSEARCH
DR 198022-70-7
MF C26 H37 N O2
SR CA
LC STN Files: BIOSIS, BIOTECHNO, CA, CAPLUS, CHEMCATS, CSCHEM, EMBASE, TOXCENTER, USPATFULL

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

40 REFERENCES IN FILE CA (1907 TO DATE)
40 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 139:332579

REFERENCE 2: 139:271316

REFERENCE 3: 139:143976

REFERENCE 4: 139:143728

REFERENCE 5: 139:111516

REFERENCE 6: 139:95772

REFERENCE 7: 138:366106

REFERENCE 8: 138:181073

REFERENCE 9: 138:131060

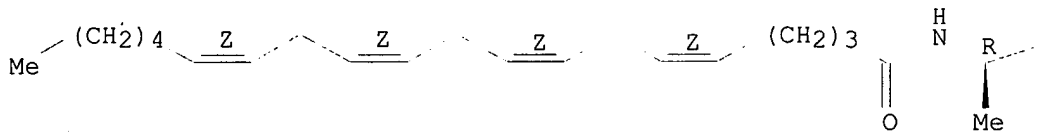
REFERENCE 10: 138:126951

L77 ANSWER 3 OF 7 REGISTRY COPYRIGHT 2003 ACS on STN

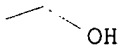
RN **157182-49-5** REGISTRY
CN 5,8,11,14-Eicosatetraenamide, N-[(1R)-2-hydroxy-1-methylethyl]-, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 5,8,11,14-Eicosatetraenamide, N-(2-hydroxy-1-methylethyl)-, [R-(all-Z)]-
OTHER NAMES:
CN (R)-Methanandamide
CN AM 356
FS STEREOSEARCH
MF C23 H39 N O2
SR CA
LC STN Files: BIOSIS, BIOTECHNO, CA, CAPLUS, CASREACT, CHEMCATS, CSCHEM, EMBASE, TOXCENTER, USPATFULL

Absolute stereochemistry. Rotation (+).
Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

67 REFERENCES IN FILE CA (1907 TO DATE)
67 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 139:346298

REFERENCE 2: 139:302061

REFERENCE 3: 139:207583

REFERENCE 4: 139:161402

REFERENCE 5: 139:159814

REFERENCE 6: 139:128248

REFERENCE 7: 139:802

REFERENCE 8: 138:331962

REFERENCE 9: 138:297668

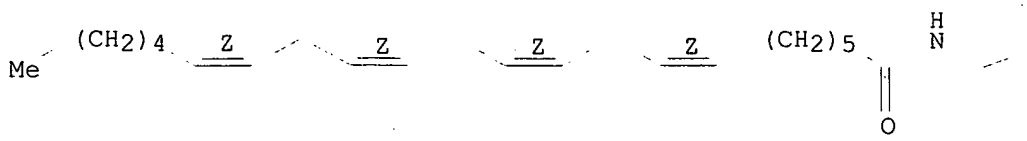
REFERENCE 10: 138:163215

L77 ANSWER 4 OF 7 REGISTRY COPYRIGHT 2003 ACS on STN
RN **150314-35-5** REGISTRY
CN 7,10,13,16-Docosatetraenamide, N-(2-hydroxyethyl)-, (7Z,10Z,13Z,16Z)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:

CN 7,10,13,16-Docosatetraenamide, N-(2-hydroxyethyl)-, (all-Z)-
OTHER NAMES:
CN (all-Z)-N-(7,10,13,16-Docosatetraenoyl)ethanolamine
FS STEREOSEARCH
MF C24 H41 N O2
SR CA
LC STN Files: CA, CAPLUS, CHEMCATS, CSCHEM, MEDLINE, TOXCENTER, USPATFULL

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

18 REFERENCES IN FILE CA (1907 TO DATE)
18 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 139:95321

REFERENCE 2: 138:106053

REFERENCE 3: 137:228362

REFERENCE 4: 137:226746

REFERENCE 5: 136:648

REFERENCE 6: 135:121637

REFERENCE 7: 134:335978

REFERENCE 8: 126:233751

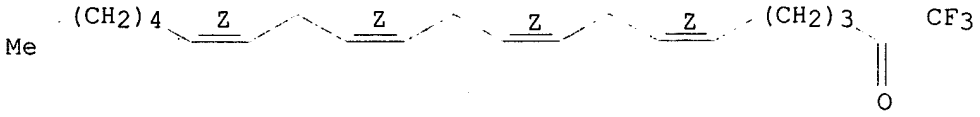
REFERENCE 9: 126:166092

REFERENCE 10: 124:83059

L77 ANSWER 5 OF 7 REGISTRY COPYRIGHT 2003 ACS on STN
RN **149301-79-1** REGISTRY
CN 6,9,12,15-Heneicosatetraen-2-one, 1,1,1-trifluoro-, (6Z,9Z,12Z,15Z)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 6,9,12,15-Heneicosatetraen-2-one, 1,1,1-trifluoro-, (all-Z)-
OTHER NAMES:
CN AN 20579
CN Arachidonyl trifluoromethyl ketone
CN BM 162353
CN L 734575
FS STEREOSEARCH

MF C21 H31 F3 O
SR CA
LC STN Files: BIOSIS, CA, CANCERLIT, CAPLUS, CHEMCATS, CSCHEM, MEDLINE, TOXCENTER, USPAT2, USPATFULL

Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

58 REFERENCES IN FILE CA (1907 TO DATE)
58 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 139:255399

REFERENCE 2: 139:246216

REFERENCE 3: 139:226711

REFERENCE 4: 139:207480

REFERENCE 5: 139:144008

REFERENCE 6: 138:362493

REFERENCE 7: 138:316897

REFERENCE 8: 138:181073

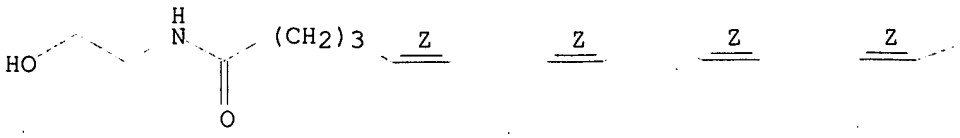
REFERENCE 9: 138:120293

REFERENCE 10: 137:382699

L77 ANSWER 6 OF 7 REGISTRY COPYRIGHT 2003 ACS on STN
RN **94421-68-8** REGISTRY
CN 5,8,11,14-Eicosatetraenamide, N-(2-hydroxyethyl)-, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 5,8,11,14-Eicosatetraenamide, N-(2-hydroxyethyl)-, (all-Z)-
OTHER NAMES:
CN Anandamide
CN Arachidonylethanolamide
CN N-(2-Hydroxyethyl)arachidonamide
CN N-(2-Hydroxyethyl)arachidonylamide
CN N-Arachidonylethanolamine
FS STEREOSEARCH
MF C22 H37 N O2
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAPLUS, CEN, CHEMCATS, CIN, CSCHEM, EMBASE, IPA, MEDLINE, MRCK*, PHAR, PROMT, RTECS*, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

-(CH2)4
Me

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

825 REFERENCES IN FILE CA (1907 TO DATE)
22 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
830 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 139:363541

REFERENCE 2: 139:347440

REFERENCE 3: 139:346298

REFERENCE 4: 139:346199

REFERENCE 5: 139:346198

REFERENCE 6: 139:345222

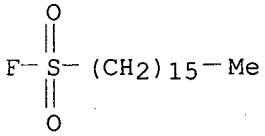
REFERENCE 7: 139:333357

REFERENCE 8: 139:332579

REFERENCE 9: 139:317310

REFERENCE 10: 139:316611

L77 ANSWER 7 OF 7 REGISTRY COPYRIGHT 2003 ACS on STN
RN **86855-26-7** REGISTRY
CN 1-Hexadecanesulfonyl fluoride (9CI) (CA INDEX NAME)
OTHER NAMES:
CN AM 374
FS 3D CONCORD
MF C16 H33 F O2 S
LC STN Files: BEILSTEIN*, BIOSIS, CA, CAPLUS, CASREACT, MEDLINE, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

18 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
18 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 139:111516

REFERENCE 2: 137:289031

REFERENCE 3: 137:150258

REFERENCE 4: 136:648

REFERENCE 5: 135:205570

REFERENCE 6: 134:336170

REFERENCE 7: 133:292844

REFERENCE 8: 132:44870

REFERENCE 9: 130:34884

REFERENCE 10: 128:30406

=> fil hcaplus
FILE 'HCAPLUS' ENTERED AT 15:37:45 ON 11 DEC 2003
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2003 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 11 Dec 2003 VOL 139 ISS 24
FILE LAST UPDATED: 10 Dec 2003 (20031210/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d all hitstr tot l76

L76 ANSWER 1 OF 10 HCAPLUS COPYRIGHT 2003 ACS on STN
AN 2002:899402 HCAPLUS
DN 138:379080
ED Entered STN: 27 Nov 2002
TI **Anandamide** induces **cough** in conscious guinea pigs through VR1 receptors
AU Jia, Yanlin; McLeod, Robbie L.; Wang, Xin; Parra, Leonard E.; Egan, Robert W.; Hey, John A.
CS Allergy, Schering-Plough Research Institute, Kenilworth, NJ, 07033, USA

SO British Journal of Pharmacology (2002), 137(6), 831-836
CODEN: BJPCBM; ISSN: 0007-1188
PB Nature Publishing Group
DT Journal
LA English
CC 1-11 (Pharmacology)

AB This study tested the direct tussigenic effect of **anandamide** in conscious guinea pigs, and its effect on vanilloid receptor (VR) 1 function in isolated primary guinea pig nodose ganglia neurons. **Anandamide** (0.3-3 mg/mL), when given by aerosol, induced **cough** in conscious guinea pigs in a concentration dependent manner. When the guinea pigs were pretreated with capsazepine, a VR1 antagonist, the **cough** was inhibited. Pretreatment with cannabinoid (CB) 1 (SR 141716A) and CB2 (SR 144528) antagonists had no effect on **anandamide**-induced **cough**. These results indicate that **anandamide**-induced **cough** is mediated through the activation of VR1. **Anandamide** (10-100 μM) increased intracellular Ca2+ concentration, as estimated by Fluo-4 fluorescence change, in isolated guinea pig nodose ganglia cells. The **anandamide** -induced Ca2+ response was inhibited by two different VR1 antagonists: capsazepine (1 μM) and iodoresiniferatoxin (I-RTX, 0.1 μM), indicating that the **anandamide**-induced Ca2+ response was through VR1 channel activation. In contrast, the CB1 (SR 141716A, 1 μM) and CB2 (SR 144528, 0.1 μM) receptor antagonists had no effect on the Ca2+ response to **anandamide**. These results provide evidence that **anandamide** activates native VRs in isolated guinea pig nodose ganglia cells and induces **cough** through activation of VR1.

ST **anandamide cough** vanilloid receptor nerve calcium

IT Capsaicin receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(1; **anandamide** induction of **cough** by activation of nerve vanilloid type 1 receptors)

IT **Cough**
Nerve
(**anandamide** induction of **cough** by activation of nerve vanilloid type 1 receptors)

IT Ganglion
(inferior vagal; **anandamide** induction of **cough** by activation of nerve vanilloid type 1 receptors)

IT Biological transport
(uptake; **anandamide** induction of **cough** by activation of nerve vanilloid type 1 receptors in relation to effect on calcium uptake)

IT **94421-68-8, Anandamide**
RL: ADV (Adverse effect, including toxicity); PAC (Pharmacological activity); BIOL (Biological study)
(**anandamide** induction of **cough** by activation of nerve vanilloid type 1 receptors)

IT 7440-70-2, Calcium, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**anandamide** induction of **cough** by activation of nerve vanilloid type 1 receptors in relation to effect on calcium uptake)

RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Barnes, P; Molec Aspects Med 1990, V11, P351 MEDLINE
(2) Bolser, D; Neurosci Lett 1991, V126, P131 HCAPLUS
(3) Calignano, A; Nature 2000, V408, P96 HCAPLUS
(4) Carr, M; Am J Respir Crit Care Med 2002, V165, P1071
(5) De Petrocellis, L; J Biol Chem 2001, V276, P12856 HCAPLUS
(6) Devane, W; Science 1992, V258, P1946 HCAPLUS
(7) Di Marzo, V; Nature 1994, V237, P686

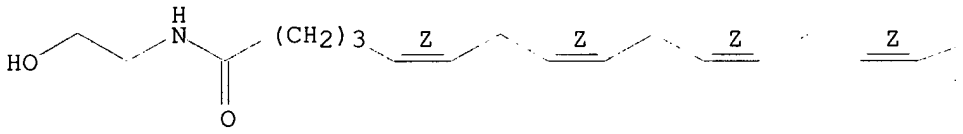
(8) Doherty, M; Thorax 2000, V55, P643 MEDLINE
(9) Felder, C; Proc Natl Acad Sci USA 1993, V90, P7656 HCAPLUS
(10) Fischer, A; J Clin Invest 1996, V98, P2284 HCAPLUS
(11) Garcia, D; J Neurosci 1998, V18, P2834 HCAPLUS
(12) Hathaway, T; Am Rev Respir Dis 1993, V148, P1233 MEDLINE
(13) Higenbottam, T; J Physiol 1990, V422
(14) Hunt, J; Am J Respir Crit Care Med 2000, V161, P694 MEDLINE
(15) Jia, Y; Br J Pharmacol 2002, V135, P764 HCAPLUS
(16) Jung, J; J Neurosci 1999, V19, P529 HCAPLUS
(17) Lin, Y; J Physiol 2002, V539, P947 HCAPLUS
(18) McLatchie, L; Br J Pharmacol 2001, V132, P899 HCAPLUS
(19) McLeod, R; Br J Pharmacol 2001, V132, P1175 HCAPLUS
(20) Michael, G; J Neurosci 1999, V19, P1844 HCAPLUS
(21) Primkumar, L; Nature 2000, V408, P985
(22) Ralevic, V; Eur J Pharmacol 2001, V424, P211 HCAPLUS
(23) Ross, R; Br J Pharmacol 2001, V132, P631 HCAPLUS
(24) Smart, D; Br J Pharmacol 2000, V129, P227 HCAPLUS
(25) Szallasi, A; Am J Respir Crit Care Med 1995, V152, P59 MEDLINE
(26) Tucker, R; Br J Pharmacol 2001, V132, P1127 HCAPLUS
(27) Vellani, V; J Physiol 2001, V534, P813 HCAPLUS
(28) Wahl, P; Mol Pharmacol 2001, V59, P9 HCAPLUS
(29) Zygmunt, P; Nature 1999, V400, P452 HCAPLUS

IT **94421-68-8, Anandamide**
RL: ADV (Adverse effect, including toxicity); PAC (Pharmacological activity); BIOL (Biological study)
(**anandamide** induction of **cough** by activation of nerve vanilloid type 1 receptors)

RN 94421-68-8 HCAPLUS
CN 5,8,11,14-Eicosatetraenamide, N-(2-hydroxyethyl)-, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

(CH2)4
Me

L76 ANSWER 2 OF 10 HCAPLUS COPYRIGHT 2003 ACS on STN
AN 2002:594730 HCAPLUS
DN 137:163801
ED Entered STN: 09 Aug 2002
TI Method of treating inflammatory conditions by inhibiting cytosolic phospholipase A2
IN Leff, Alan R.
PA USA
SO PCT Int. Appl., 40 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61P038-46

ICS A61P035-18; A61P031-557; A61P019-02; A61P011-00; A61P011-06; C07H021-04; C12Q001-68; C12P019-34; C12N019-20
CC 1-7 (Pharmacology)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002060535	A1	20020808	WO 2002-US3266	20020131
	WO 2002060535	C1	20031023		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

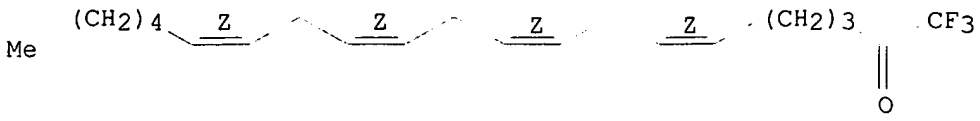
	US 2002165119	A1	20021107	US 2002-62730	20020131
PRAI	US 2001-265298P	P	20010131		

AB Methods for treating or modulating inflammatory processes or chronic inflammatory conditions dependent upon cellular inflammation, such as asthma and rheumatoid arthritis are provided, as well as methods for inhibiting or blocking eosinophil migration and airway hyperresponsiveness. Also described is a method for treating or preventing the adhesion of granulocytes and other inflammatory cells into the tissue that is the site of the inflammation. In particular, the methods relate to the therapeutic or prophylactic use of compds. and compns. that inhibit cytosolic phospholipase A2.

ST antiinflammatory phospholipase A2 inhibitor
IT Respiratory distress syndrome
(adult; treating inflammatory conditions by inhibiting cytosolic phospholipase A2)
IT Gastric juice
(aspiration; treating inflammatory conditions by inhibiting cytosolic phospholipase A2)
IT Drug delivery systems
(carriers; treating inflammatory conditions by inhibiting cytosolic phospholipase A2)
IT Cytoplasm
(cytosol; treating inflammatory conditions by inhibiting cytosolic phospholipase A2)
IT Lung, disease
(edema; treating inflammatory conditions by inhibiting cytosolic phospholipase A2)
IT Lung, disease
(fibrosis; treating inflammatory conditions by inhibiting cytosolic phospholipase A2)
IT T cell (lymphocyte)
(helper cell, precursor; treating inflammatory conditions by inhibiting cytosolic phospholipase A2)
IT T cell (lymphocyte)
(helper cell; treating inflammatory conditions by inhibiting cytosolic phospholipase A2)
IT **Respiratory tract, disease**
(**hyperresponsiveness**; treating inflammatory conditions by inhibiting cytosolic phospholipase A2)
IT Intestine, disease
(inflammatory; treating inflammatory conditions by inhibiting cytosolic phospholipase A2)
IT Lysophospholipids
Phospholipids, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(of cell membranes; treating inflammatory conditions by inhibiting

cytosolic phospholipase A2)
IT Mast cell
(precursor; treating inflammatory conditions by inhibiting cytosolic phospholipase A2)
IT Nose, disease
(rhinitis; treating inflammatory conditions by inhibiting cytosolic phospholipase A2)
IT Anti-inflammatory agents
Antiasthmatics
Antirheumatic agents
Asthma
Basophil
Cell membrane
Cell migration
Eosinophil
Inflammation
Leukocyte
Macrophage
Polymorphonuclear leukocyte
Rheumatoid arthritis
(treating inflammatory conditions by inhibiting cytosolic phospholipase A2)
IT Leukotrienes
Prostaglandins
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
(treating inflammatory conditions by inhibiting cytosolic phospholipase A2)
IT 9001-84-7, Phospholipase a2
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(inhibitors; treating inflammatory conditions by inhibiting cytosolic phospholipase A2)
IT 65154-06-5, Paf
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
(treating inflammatory conditions by inhibiting cytosolic phospholipase A2)
IT **149301-79-1**
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(treating inflammatory conditions by inhibiting cytosolic phospholipase A2)
RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Anon; JP 09268153 A 1996 HCAPLUS
(2) Bennett; US 6008344 A 1999 HCAPLUS
(3) Bristol-Myers Squibb Company; WO 9915129 1999 HCAPLUS
(4) Chiou; US 5328842 A 1994 HCAPLUS
(5) John; US 5994398 A 1999 HCAPLUS
(6) Jones; US 5589170 A 1996 HCAPLUS
IT **149301-79-1**
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(treating inflammatory conditions by inhibiting cytosolic phospholipase A2)
RN 149301-79-1 HCAPLUS
CN 6,9,12,15-Heneicosatetraen-2-one, 1,1,1-trifluoro-, (6Z,9Z,12Z,15Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



L76 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2003 ACS on STN
AN 2002:123602 HCAPLUS
DN 136:161403
ED Entered STN: 15 Feb 2002
TI **Anandamide** and structurally related lipids as vanilloid receptor modulators
IN Hogestatt, Edward; Zygmunt, Peter
PA Swed.
SO U.S. Pat. Appl. Publ., 33 pp., Cont.-in-part of U.S. Ser. No. 567,034.
CODEN: USXXCO
DT Patent
LA English
IC ICM A61K031-55
ICS A61K031-47; A61K031-404; A61K031-16
NCL 514627000
CC 1-12 (Pharmacology)
Section cross-reference(s): 2
FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2002019444	A1	20020214	US 2001-849972	20010508
PRAI US 2000-567034	A2	20000508		

OS MARPAT 136:161403
AB The invention discloses that **anandamide** is an endogenous ligand for vanilloid receptors, and especially the vanilloid receptor VR1. Other structurally related lipids, such as **AM404**, 1-arachidonylglycerol, and 2-arachidonylglycerol, are identified having vanilloid receptor activity as well. Methods of treating individuals suffering from, or at risk of suffering from, diseases and disorders associated with abnormal vanilloid receptor function are provided, as are methods of designing and identifying vanilloid receptor agonists and antagonists.
ST **anandamide** lipid analog vanilloid receptor modulator
IT Nervous system, disease
(Guillain-Barre syndrome, treatment of pain associated with; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)
IT Capsaicin receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(VR1 (vanilloid receptor 1); **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)
IT Nose, disease
(allergic rhinitis; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)
IT Leg
(amputation, treatment of pain associated with; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)
IT Allergy inhibitors
Analgesics

Anti-inflammatory agents
Antiarthritics
Antiasthmatics
Antiemetics
Antimigraine agents
Antirheumatic agents
Antitumor agents
Antitussives
Antiulcer agents
Autoimmune disease
Drug delivery systems
Drug screening
Eczema
Gout
High throughput screening
Infection
Organ, animal, disease
Pain
Psoriasis
Urticaria
Vasodilators
Wound healing promoters
(**anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Capsaicin receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Heart, disease
(angina pectoris, unstable; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Antiarteriosclerotics
(antiatherosclerotics; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Infection
(bacterial; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Shock (circulatory collapse)
(cardiogenic; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Brain, disease
(cerebrum, vasospasm, from subarachnoid hemorrhage; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Headache
(cluster, treatment of pain associated with; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Eye, disease
(conjunctivitis; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Meninges
(disease, subarachnoid hemorrhage, cerebral vasospasm from;

anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Shock (circulatory collapse)
(hemorrhagic; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Bladder, disease
(incontinence; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Heart, disease
(infarction; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Human herpesvirus
(infection; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Intestine, disease
(inflammatory; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Mammary gland
Surgery
(mastectomy, treatment of pain associated with; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Digestive tract, disease
(mucosal damage; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Pharynx
(nasopharynx, adenoids; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Adenoid
(nasopharynx; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Nerve, disease
(neuralgia; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Inflammation
(neurogenic; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Pain
(nociceptive; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Infection
(parasite; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Nerve, disease
(peripheral neuropathy, treatment of pain associated with; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Nerve, disease

(polyneuropathy, chronic peripheral, treatment of pain associated with; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Nose, disease
(rhinitis, vasomotor; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Nose, disease
(rhinitis; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Nerve
(sensory, vanilloid receptors of; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Shock (circulatory collapse)
(septic; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Brain, disease
(stroke; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Headache
Osteoarthritis
Pruritus
(treatment of pain associated with; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Animal cell
(vanilloid receptors expression in; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Infection
(viral; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

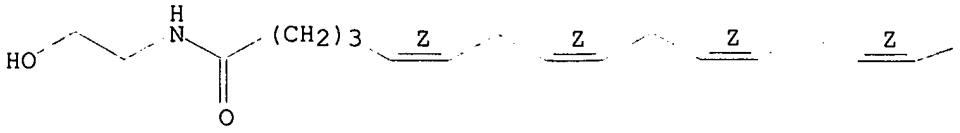
IT 35474-99-8, 5,8,11,14-Eicosatetraenoic acid, 2,3-dihydroxypropyl ester, (5Z,8Z,11Z,14Z)- 53847-30-6, 2-Arachidonylglycerol **94421-68-8, Anandamide 183718-77-6, AM 404**
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT **94421-68-8, Anandamide 183718-77-6, AM 404**
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

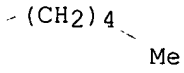
RN 94421-68-8 HCAPLUS
CN 5,8,11,14-Eicosatetraenamide, N-(2-hydroxyethyl)-, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

PAGE 1-A



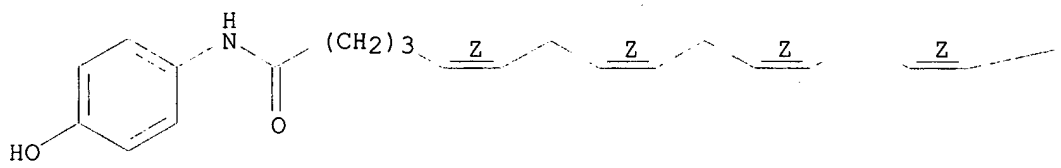
PAGE 1-B



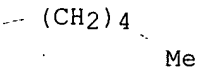
RN 183718-77-6 HCAPLUS
CN 5,8,11,14-Eicosatetraenamide, N-(4-hydroxyphenyl)-, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



L76 ANSWER 4 OF 10 HCAPLUS COPYRIGHT 2003 ACS on STN
AN 2001:868275 HCAPLUS
DN 136:648
ED Entered STN: 30 Nov 2001
TI Cannabinoid receptor agonists for treatment of **cough** without psychoactive effects
IN **Piomelli, Daniele**
PA The Regents of the University of California, USA
SO PCT Int. Appl., 63 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61L009-04
ICS A61K031-135; A61K031-13
CC 1-9 (Pharmacology)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2001089589	A1	20011129	WO 2001-US16880	20010523 <--

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS,

LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO,
RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ,
VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
US 2002035150 A1 20020321 US 2001-864920 20010523 <--
EP 1294411 A1 20030326 EP 2001-939408 20010523 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
JP 2003534298 T2 20031118 JP 2001-585830 20010523 <--
PRAI US 2000-206591P P 20000523 <--
WO 2001-US16880 W 20010523 <--
OS MARPAT 136:648

AB The invention discloses the existence of cannabinoid receptors in the airways, which are functionally linked to inhibition of **cough**. A method of ameliorating **cough** comprising the local administration to the upper respiratory airways of a subject in need of such treatment of cannabinoid compds. e.g. RC(O)X[C(R3)(R4)]nR2 where [X=NR1,O; R = (un)saturated, (a)chiral, (a)cyclic, (un)substituted, C11-29 hydrocarbyl; R1, R3, R4 = C1-4 alkyl, C2-4 alkenyl, C2-4 alkynyl, C3-6 cycloalkyl, C2-4 hydroxyalkyl; R2=OH, OC(O)(C1-4 alkyl); n=2-4]. Locally acting cannabinoid agents can be administered to the airways of a subject to ameliorate **cough**, without causing the psychoactive effects characteristic of systemically administered cannabinoids. In addition, locally or systemically administered cannabinoid inactivation inhibitors can also be used to ameliorate **cough**. The present invention also defines conditions under which cannabinoid agents can be administered to produce anti-**tussive** effects devoid of bronchial constriction.

ST cannabinoid receptor agonist **antitussive cough** bronchial constriction

IT Drug delivery systems
(aerosols; cannabinoid receptor agonists for treatment of **cough** without psychoactive effects)

IT **Bronchi**
(bronchoconstriction; cannabinoid receptor agonists for treatment of **cough** without psychoactive effects)

IT **Antitussives**
(cannabinoid receptor agonists for treatment of **cough** without psychoactive effects)

IT Neoplasm
(induced **cough**; cannabinoid receptor agonists for treatment of **cough** without psychoactive effects)

IT Drug delivery systems
(injections, i.v.; cannabinoid receptor agonists for treatment of **cough** without psychoactive effects)

IT Drug delivery systems
(local; cannabinoid receptor agonists for treatment of **cough** without psychoactive effects)

IT Drug delivery systems
(oral; cannabinoid receptor agonists for treatment of **cough** without psychoactive effects)

IT Cannabinoid receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(type CB1; cannabinoid receptor agonists for treatment of **cough** without psychoactive effects)

IT **Respiratory tract**
(**upper**; cannabinoid receptor agonists for treatment of **cough** without psychoactive effects)

IT **86855-26-7**, 1-**Hexadecanesulfonyl fluoride**
94421-68-8, **Anandamide 149301-79-1**

150314-35-5 157182-49-5 183718-77-6
187223-90-1
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cannabinoid receptor agonists for treatment of **cough** without psychoactive effects)

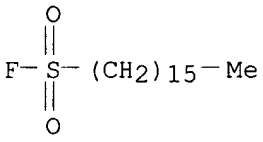
IT 9015-82-1, ACE
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(inhibitor-induced **cough**; cannabinoid receptor agonists for treatment of **cough** without psychoactive effects)

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE
(1) de Petrocellis; Chemistry and Physics of Lipids 2000, V108(1-2), P191 HCAPLUS
(2) Hussain; US 4464378 A 1984 HCAPLUS
(3) Shamsuddin; J Lab And Clin Med 1997, V130(6), P615 HCAPLUS
(4) Stengel; European Journal of Pharmacology 1998, V355, P57 HCAPLUS
(5) Sugiura; Chemistry and Physics of Lipids 2000, V108(1-2), P89 HCAPLUS
(6) Zhu; Journal of Immunology 1999, V163(6), P3423 HCAPLUS

IT **86855-26-7, 1-Hexadecanesulfonyl fluoride**
94421-68-8, Anandamide 149301-79-1
150314-35-5 157182-49-5 183718-77-6
187223-90-1
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cannabinoid receptor agonists for treatment of **cough** without psychoactive effects)

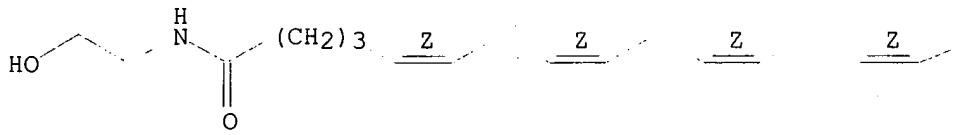
RN 86855-26-7 HCAPLUS
CN 1-Hexadecanesulfonyl fluoride (9CI) (CA INDEX NAME)



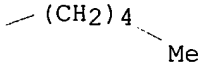
RN 94421-68-8 HCAPLUS
CN 5,8,11,14-Eicosatetraenamide, N-(2-hydroxyethyl)-, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

PAGE 1-A



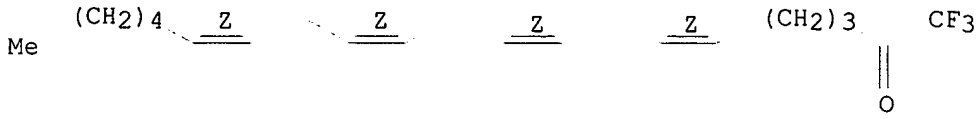
PAGE 1-B



RN 149301-79-1 HCAPLUS

CN 6,9,12,15-Heneicosatetraen-2-one, 1,1,1-trifluoro-, (6Z,9Z,12Z,15Z)- (9CI) (CA INDEX NAME)

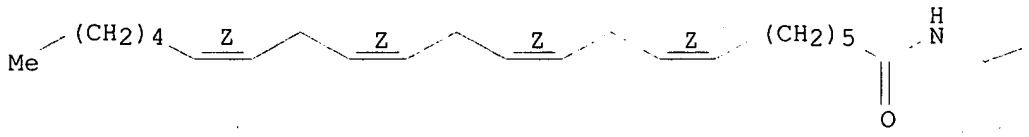
Double bond geometry as shown.



RN 150314-35-5 HCAPLUS
CN 7,10,13,16-Docosatetraenamide, N-(2-hydroxyethyl)-, (7Z,10Z,13Z,16Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

PAGE 1-A



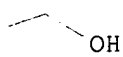
PAGE 1-B

RN 157182-49-5 HCAPLUS
CN 5,8,11,14-Eicosatetraenamide, N-[(1R)-2-hydroxy-1-methylethyl]-, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).
Double bond geometry as shown.

PAGE 1-A

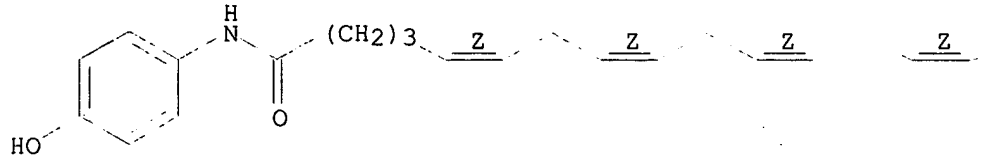
PAGE 1-B



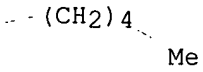
RN 183718-77-6 HCAPLUS
CN 5,8,11,14-Eicosatetraenamide, N-(4-hydroxyphenyl)-, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

PAGE 1-A



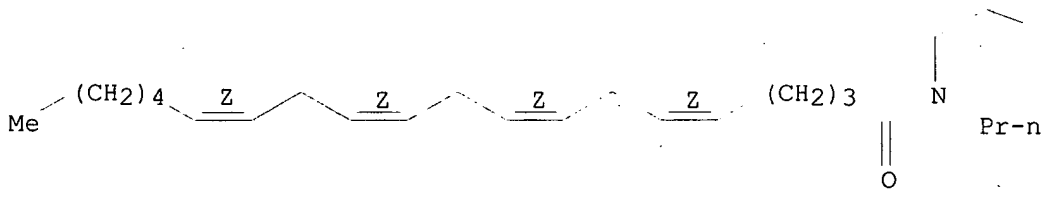
PAGE 1-B



RN 187223-90-1 HCAPLUS
CN 5,8,11,14-Eicosatetraenamide, N-(2-hydroxyethyl)-N-propyl-, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

L76 ANSWER 5 OF 10 HCAPLUS COPYRIGHT 2003 ACS on STN
AN 2001:834229 HCAPLUS
DN 136:144883
ED Entered STN: 18 Nov 2001
TI The role of sensory nerve endings in nerve growth factor-induced airway hyperresponsiveness to histamine in guinea-pigs
AU De Vries, Annick; Van Rijnsoever, Carolien; Engels, Ferdi; Henricks, Paul A. J.; Nijkamp, Frans P.
CS Department of Pharmacology and Pathophysiology, Utrecht Institute for Pharmaceutical Sciences, Utrecht University, Utrecht, 3508 TB, Neth.
SO British Journal of Pharmacology (2001), 134(4), 771-776
CODEN: BJPCBM; ISSN: 0007-1188
PB Nature Publishing Group
DT Journal
LA English
CC 1-7 (Pharmacology)
AB Nerve growth factor induces an airway hyperresponsiveness in vivo in guinea-pigs, as the authors have shown previously. Since antagonizing the neurokinin-1 (NK1) receptor can prevent this NGF-induced airway hyperresponsiveness and since sensory nerves release tachykinins, the authors investigated the role of sensory nerves in the NGF-induced airway hyperresponsiveness. We used isolated tracheal rings from guinea-pigs to

measure tracheal contractility. In these rings sensory nerve endings are present, but these endings lack any contact with their cell bodies. In this in vitro system, NGF dose-dependently induced a tracheal hyperresponsiveness to histamine. The NK1 receptor antagonist SR140333 could block the induction of tracheal hyperresponsiveness. To further investigate the involvement of sensory nerve endings the authors used the cannabinoid receptor 1 (CB1) agonist R-**methanandamide** to inhibit excitatory events at the nerve terminal. The CB1 receptor agonist was capable of blocking the tracheal hyperresponsiveness to NGF in the isolated system, as well as the airway hyperresponsiveness to NGF in vivo. This indicates that NGF can induce an increase in airway responsiveness in the absence of sensory nerve cell bodies. NGF may act by increasing substance P release from sensory nerve endings, without upregulation of substance P in the neurons. Substance P in its turn is responsible for the induction of the NGF-induced airway hyperresponsiveness.

ST SR140333 nerve growth factor antiasthmatic; sensory nerve ending SR140333 substance P antiasthmatic

IT Tachykinin receptors
(NK1 antagonists; role of sensory nerve endings in nerve growth factor-induced airway hyperresponsiveness to histamine in guinea-pigs)

IT **Respiratory tract, disease**
(**hyperresponsiveness**; role of sensory nerve endings in nerve growth factor-induced airway hyperresponsiveness to histamine in guinea-pigs)

IT Allergy inhibitors
Trachea (anatomical)
(role of sensory nerve endings in nerve growth factor-induced airway hyperresponsiveness to histamine in guinea-pigs)

IT Sensory receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(role of sensory nerve endings in nerve growth factor-induced airway hyperresponsiveness to histamine in guinea-pigs)

IT Tachykinin receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(type NK1; role of sensory nerve endings in nerve growth factor-induced airway hyperresponsiveness to histamine in guinea-pigs)

IT 51-45-6, Histamine, biological studies 9061-61-4, Nerve growth factor
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
(role of sensory nerve endings in nerve growth factor-induced airway hyperresponsiveness to histamine in guinea-pigs)

IT 33507-63-0, Substance P
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(role of sensory nerve endings in nerve growth factor-induced airway hyperresponsiveness to histamine in guinea-pigs)

IT 155418-05-6, SR140333
RL: DMA (Drug mechanism of action); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(role of sensory nerve endings in nerve growth factor-induced airway hyperresponsiveness to histamine in guinea-pigs)

RE.CNT 52 THERE ARE 52 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Abadji, V; J Med Chem 1994, V37, P1889 HCAPLUS
(2) Amdur, M; Am J Physiol 1958, V192, P364 MEDLINE
(3) Barouch, R; J Neuroimmunol 2000, V103, P112 HCAPLUS
(4) Boichot, E; Neuropeptides 1993, V25, P307 HCAPLUS
(5) Bonini, S; Proc Natl Acad Sci USA 1996, V93, P10955 HCAPLUS
(6) Braun, A; Clin Exp Allergy 2000, V30, P178 HCAPLUS
(7) Braun, A; Eur J Immunol 1998, V28, P3240 HCAPLUS
(8) Braun, A; Int Arch Allergy Immunol V118, P163 HCAPLUS
(9) Braun, A; Int Arch Allergy Immunol V124, P205 HCAPLUS
(10) Brodie, C; FEBS Lett 1996, V394, P117 HCAPLUS
(11) Brodie, C; J Neuroimmunol 1998, V81, P20 HCAPLUS
(12) Burgi, B; J Immunol 1996, V15, P5582

(13) Calignano, A; Nature 2000, V408, P96 HCAPLUS
(14) Daouj, S; Br J Pharmacol 2000, V130, P49
(15) De Giorgio, R; J Neuroimmunol 1998, V82, P175
(16) De Vries, A; Am J Respir Crit Care Med 1999, V159, P1541 MEDLINE
(17) Dupont, J; Eur J Neurosci 2000, V12, P215 MEDLINE
(18) Ehrhard, P; Proc Natl Acad Sci USA 1993, V90, P5423 HCAPLUS
(19) Esmonds-Alt, X; Eur J Pharmacol 1993, V250, P403
(20) Girard, V; Br J Pharmacol 1997, V122, P841 HCAPLUS
(21) Hattori, A; FEBS Lett 1994, V340, P177 HCAPLUS
(22) Ho, W; J Immunol 1997, V159, P5654 HCAPLUS
(23) Hohmann, A; Neuroscience 1999, V90, P923 HCAPLUS
(24) Hoyle, G; Am J Respir Cell Mol Biol 1998, V18, P149 HCAPLUS
(25) Hunter, D; Am J Respir Crit Care Med 2000, V161, P1985 MEDLINE
(26) Knipper, M; Neuroreport 1993, V4, P483 HCAPLUS
(27) Kraneveld, A; Am J Respir Crit Care Med 1997, V156, P367 MEDLINE
(28) Lambiase, A; J Allergy Clin Immunol 1997, V100, P408 HCAPLUS
(29) Lee, K; Cell 1992, V69, P737 HCAPLUS
(30) Leon, A; Proc Natl acad Sci USA 1994, V91, P3739 HCAPLUS
(31) Lindsay, R; Nature 1989, V337, P362 HCAPLUS
(32) Lundberg, J; Can J Physiol Pharmacol 1995, V73, P908 HCAPLUS
(33) Matsuda, H; Proc Natl Acad Sci USA 1988, V85, P6508 HCAPLUS
(34) Mitchell, R; Am J Phsyiol 1995, V269, PL837 HCAPLUS
(35) Moalem, G; J Autoimmun 2000, V15, P331 MEDLINE
(36) Otten, U; Proc Natl Acad Sci USA 1989, V86, P10059 HCAPLUS
(37) Rice, W; Eur J Pharmacol 1997, V327, P227 HCAPLUS
(38) Richardson, J; Pain 1998, V75, P111 HCAPLUS
(39) Rubin, J; J Neurosci Res 1981, V6, P451 HCAPLUS
(40) Sanico, A; Am J Respir Crit Care Med 2000, V161, P1631 MEDLINE
(41) Sawada, J; Blood 2000, V95, P2052 HCAPLUS
(42) Shu, X; Neurosci Lett 1999, V274, P159 HCAPLUS
(43) Solomon, A; J Allergy Clin Immunol 1998, V102, P454 HCAPLUS
(44) Susaki, Y; Blood 1996, V88, P4630 HCAPLUS
(45) Van Minnen, J; Histochem J 1994, V26, P377 HCAPLUS
(46) Van Schoor, J; Eur Respir J 2000, V16, P514 HCAPLUS
(47) Villoslada, P; J Exp Med 2000, V191, P1799 HCAPLUS
(48) Virchow, J; Am J Respir Crit Care Med 1998, V158, P2002 MEDLINE
(49) Welker, P; Immunology 2000, V99, P418 HCAPLUS
(50) Woolf, C; Philos Trans R Soc Lond B Biol Sci 1996, V351, P441 HCAPLUS
(51) Yoshida, K; J Neurochem 1992, V59, P919 HCAPLUS
(52) Zhou, D; Am J Respir Crit Care Med 2000, V161, PA839

L76 ANSWER 6 OF 10 HCAPLUS COPYRIGHT 2003 ACS on STN
AN 2001:833079 HCAPLUS
DN 135:352838
ED Entered STN: 16 Nov 2001
TI **Anandamide** and structurally related lipids as vanilloid receptor modulators
IN Hogestatt, Edward; Zygmunt, Peter
PA Forskarpatent I Syd AB, Swed.
SO PCT Int. Appl., 107 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K031-16
ICS A61K031-167; A61K031-232
CC 1-12 (Pharmacology)
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001085158	A2	20011115	WO 2001-IB1267	20010508
	WO 2001085158	A3	20020613		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,

GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT,
RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US,
UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRAI US 2000-567034 A 20000508

OS MARPAT 135:352838

AB The invention discloses that **anandamide** is an endogenous ligand for vanilloid receptors, and especially the vanilloid receptor VR1. Other structurally related lipids, such as **AM404**, 1-arachidonylglycerol, and 2-arachidonylglycerol, are identified having vanilloid receptor activity as well. Methods of treating individuals suffering from, or at risk of suffering from, diseases and disorders associated with abnormal vanilloid receptor function are provided, as are methods of designing and identifying vanilloid receptor agonists and antagonists.

ST **anandamide** lipid analog vanilloid receptor modulator

IT Nervous system
(Guillain-Barre syndrome, treatment of pain associated with; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Capsaicin receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(VR1 (vanilloid receptor 1); **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Nose
(allergic rhinitis; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Leg
(amputation, treatment of pain associated with; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Allergy inhibitors
Analgesics
Anti-inflammatory agents
Antiarthritics
Antiasthmatics
Antiemetics
Antimigraine agents
Antirheumatic agents
Antitumor agents
Antitussives
Antiulcer agents
Autoimmune disease
Drug delivery systems
Eczema
Gout
Infection
Pain
Psoriasis
Urticaria
Wound healing promoters
(**anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Capsaicin receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Heart, disease
(angina pectoris, unstable; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Antiarteriosclerotics
(antiatherosclerotics; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Infection
(bacterial; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Shock (circulatory collapse)
(cardiogenic; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Brain, disease
(cerebrum, vasospasm, from subarachnoid hemorrhage; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Headache
(cluster, treatment of pain associated with; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Eye, disease
(conjunctivitis; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Digestive tract
(disease, mucosal damage; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Organ, animal
(disease; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Shock (circulatory collapse)
(hemorrhagic; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Bladder
(incontinence; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Heart, disease
(infarction; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Human herpesvirus
(infection; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Intestine, disease
(inflammatory; **anandamide** and structurally related lipids as

vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Mammary gland
Surgery
(mastectomy, treatment of pain associated with; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Pharynx
(nasopharynx, adenoids; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Adenoid
(nasopharynx; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Nerve, disease
(neuralgia; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Inflammation
(neurogenic; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Pain
(nociceptive; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Infection
(parasite; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Nerve, disease
(peripheral neuropathy, treatment of pain associated with; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Nerve, disease
(polyneuropathy, chronic peripheral, treatment of pain associated with; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Nose
(rhinitis, vasomotor; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Nose
(rhinitis; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Shock (circulatory collapse)
(septic; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Brain, disease
(stroke; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Meninges
(subarachnoid hemorrhage, cerebral vasospasm from; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Headache
Osteoarthritis
Pruritus
(treatment of pain associated with; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT Infection
(viral; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

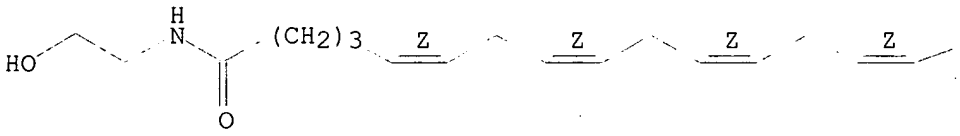
IT 35474-99-8 53847-30-6, 2-Arachidonylglycerol **94421-68-8, Anandamide 183718-77-6, AM 404**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

IT **94421-68-8, Anandamide 183718-77-6, AM 404**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases associated with abnormal vanilloid receptor function)

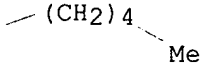
RN 94421-68-8 HCAPLUS
CN 5,8,11,14-Eicosatetraenamide, N-(2-hydroxyethyl)-, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

PAGE 1-A



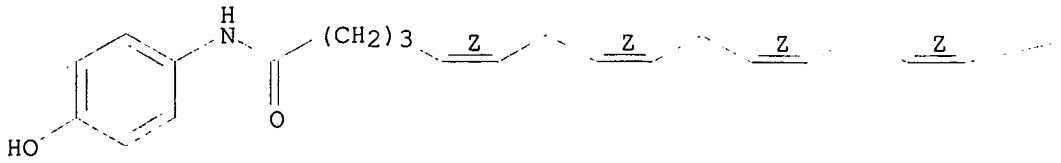
PAGE 1-B



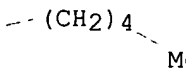
RN 183718-77-6 HCAPLUS
CN 5,8,11,14-Eicosatetraenamide, N-(4-hydroxyphenyl)-, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

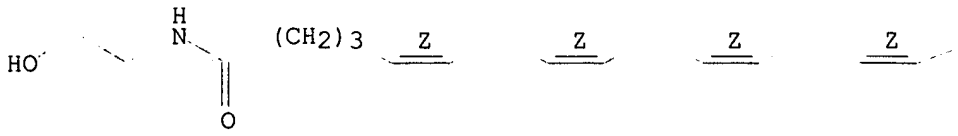


L76 ANSWER 7 OF 10 HCAPLUS COPYRIGHT 2003 ACS on STN
AN 2001:789791 HCAPLUS
DN 136:95834
ED Entered STN: 31 Oct 2001
TI **Anandamide** induces cardiovascular and respiratory reflexes via vasosensory nerves in the anaesthetized rat
AU Smith, Paula J. W.; McQueen, Daniel S.
CS Department of Neuroscience, University of Edinburgh Medical School, Edinburgh, EH8 9JZ, UK
SO British Journal of Pharmacology (2001), 134(3), 655-663
CODEN: BJPCBM; ISSN: 0007-1188
PB Nature Publishing Group
DT Journal
LA English
CC 1-8 (Pharmacology)
AB 1 We tested the hypothesis that sensory nerves innervating blood vessels play a role in the local and systemic regulation of the cardiovascular and respiratory (CVR) systems. We measured CVR reflexes evoked by administration of **anandamide** (86-863 nmoles) and capsaicin (0.3-10 nmoles) into the hindlimb vasculature of anesthetized rats. 2 **Anandamide** and capsaicin each caused a rapid dose-dependent reflex fall in blood pressure and an increase in ventilation when injected intra-arterially into the hindlimb. 3 Action of both agonists at the vanilloid receptor (VR1) on perivascular sensory nerves was investigated using capsazepine (1 mg kg-1 i.a.) a competitive VR1 antagonist, ruthenium red (1 mg kg-1 i.a.), a non-competitive antagonist at VR1, or a desensitizing dose of capsaicin (200 nmoles i.a.). The cannabinoid receptor antagonist SR141716 (1 mg kg-1 i.a.) was used to determine agonist activity at the CB1 receptor. 4 Capsazepine, ruthenium red, or acute VR1 desensitization by capsaicin-pretreatment, markedly attenuated the reflex CVR responses evoked by **anandamide** and capsaicin ($P < 0.05$; paired Student's t-test). Blockade of CB1 had no significant effect on the responses to **anandamide**. 5 Local sectioning of the femoral and sciatic nerves attenuated CVR responses to **anandamide** and capsaicin ($P < 0.05$). Vagotomy or carotid sinus sectioning had no significant effect on **anandamide**- or capsaicin-induced responses. 6 These data demonstrate that both the endogenous cannabinoid, **anandamide**, and the vanilloid, capsaicin, evoke CVR reflexes when injected intra-arterially into the rat hindlimb. These responses appear to be mediated reflexly via VR1 located on sensory nerve endings within the hindlimb vasculature.
ST **anandamide** cardiovascular respiration reflex vasosensory nerve vanilloid receptor
IT Cardiovascular system
Reflex
Respiration, animal
Respiratory tract
(**anandamide** induces cardiovascular and respiratory reflexes via vasosensory nerves in the anesthetized rat)
IT Capsaicin receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**anandamide** induces cardiovascular and respiratory reflexes via vasosensory nerves in the anesthetized rat)

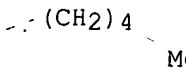
IT Nerve
(sensory; **anandamide** induces cardiovascular and respiratory reflexes via vasosensory nerves in the anesthetized rat)
IT 404-86-4, Capsaicin **94421-68-8, Anandamide**
RL: PAC (Pharmacological activity); BIOL (Biological study)
(**anandamide** induces cardiovascular and respiratory reflexes via vasosensory nerves in the anesthetized rat)
RE.CNT 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Ahluwalia, J; Neuroscience 2000, V100, P685 HCAPLUS
(2) Bazett, H; Brain 1928, V51, P18
(3) Bevan, S; Trends Pharmacol Sci 1990, V11, P330 HCAPLUS
(4) Bisogno, T; J Biol Chem 1997, V272, P3315 HCAPLUS
(5) Brender, D; Am J Physiol 1969, V217, P1837 HCAPLUS
(6) Caterina, M; Nature 1997, V389, P816 HCAPLUS
(7) Coleridge, H; Ann Rev Physiol 1980, V42, P413 HCAPLUS
(8) De Petrocellis, L; J Biol Chem 2001, V276, P12856 HCAPLUS
(9) Deutsch, D; J Clin Invest 1997, V100, P1538 HCAPLUS
(10) Devane, W; Science 1992, V258, P1946 HCAPLUS
(11) Di Marzo, V; Eur J Biochem 1999, V264, P258 HCAPLUS
(12) Donnerer, J; Naunyn-Schmiedeberg's Arch Pharmacol 1982, V320, P54 HCAPLUS
(13) Donnerer, J; Naunyn-Schmiedeberg's Arch Pharmacol 1983, V324, P293 HCAPLUS
(14) Hainsworth, R; Adv Exp Med Biol 1995, V381, P157 MEDLINE
(15) Heymans, C; Reflexogenic areas of the cardiovascular system 1958
(16) Ishioka, N; J Pharmacol Exp Ther 1999, V289, P245 HCAPLUS
(17) Kaczynska, K; Acta Neurobiol Exp 2000, V60, P159 MEDLINE
(18) Lake, K; J Pharmacol Exp Ther 1997, V281, P1030 HCAPLUS
(19) Langham, B; Anaesthesia 1992, V47, P890 MEDLINE
(20) Lewis, T; Clin Sci 1935, V2, P237
(21) Lundberg, J; Blood Vessels 1991, V28, P27 HCAPLUS
(22) Makara, G; Arch Int Pharmacodyn 1967, V170, P39 HCAPLUS
(23) Malliani, A; J Auton Nerv Syst 1981, V3, P231 MEDLINE
(24) Marshall, J; Physiol Rev 1994, V74, P543 HCAPLUS
(25) Matsuda, L; Nature 1990, V346, P561 HCAPLUS
(26) McQueen, D; J Physiol 1998, V507.3, P843
(27) Mechoulam, R; Eur J Pharmacol 1998, V359, P1 HCAPLUS
(28) Moskowitz, M; Neurol Clin 1990, V8, P801 MEDLINE
(29) Munro, S; Nature 1993, V365, P61 HCAPLUS
(30) Pertwee, R; Exp Opin Invest Drugs 2000, V9, P1
(31) Ralevic, V; Br J Pharmacol 2000, V130, P1483 HCAPLUS
(32) Ross, R; Br J Pharmacol 2001, V132, P631 HCAPLUS
(33) Saria, A; J Pharm Pharmacol 1982, V34, P273 HCAPLUS
(34) Shepherd, J; Circulation 1981, V63, P1 MEDLINE
(35) Smart, D; Br J Pharmacol 2000, V129, P227 HCAPLUS
(36) Tallarida, G; J Pharmacol Exp Ther 1979, V208, P319 HCAPLUS
(37) Tan, C; Anaesthesia 1998, V53, P468 HCAPLUS
(38) Tucker, R; Br J Pharmacol 2001, V132, P1127 HCAPLUS
(39) Varga, K; Hypertension 1996, V28, P682 HCAPLUS
(40) Wagner, J; Nature 1997, V390, P518 HCAPLUS
(41) Woollard, H; Heart 1927, V13, P321
(42) Zygmunt, P; Nature 1999, V400, P452 HCAPLUS
IT **94421-68-8, Anandamide**
RL: PAC (Pharmacological activity); BIOL (Biological study)
(**anandamide** induces cardiovascular and respiratory reflexes via vasosensory nerves in the anesthetized rat)
RN 94421-68-8 HCAPLUS
CN 5,8,11,14-Eicosatetraenamide, N-(2-hydroxyethyl)-, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



L76 ANSWER 8 OF 10 HCAPLUS COPYRIGHT 2003 ACS on STN
AN 2000:802719 HCAPLUS
DN 134:95328
ED Entered STN: 15 Nov 2000
TI Bidirectional control of airway responsiveness by endogenous cannabinoids
AU Calignano, A.; Katona, I.; Desarnaud, F.; Giuffrida, A.; La Rana, G.; Mackie, K.; Freund, T. F.; **Piomelli, D.**
CS Department of Pharmacology, University of Naples, Naples, 80131, Italy
SO Nature (London) (2000), 408(6808), 96-101
CODEN: NATUAS; ISSN: 0028-0836
PB Nature Publishing Group
DT Journal
LA English
CC 1-9 (Pharmacology)
Section cross-reference(s): 13
AB Smoking marijuana or administration of its main active constituent, Δ9-tetrahydrocannabinol (Δ9-THC), may exert potent dilating effects on human airways. But the physiol. significance of this observation and its potential therapeutic value are obscured by the fact that some asthmatic patients respond to these compds. with a paradoxical bronchospasm. The mechanisms underlying these contrasting responses remain unresolved. Here we show that the endogenous cannabinoid **anandamide** exerts dual effects on bronchial responsiveness in rodents: it strongly inhibits bronchospasm and **cough** evoked by the chemical irritant, capsaicin, but causes bronchospasm when the constricting tone exerted by the vagus nerve is removed. Both effects are mediated through peripheral CB1 cannabinoid receptors found on axon terminals of airway nerves. Biochem. analyses indicate that **anandamide** is synthesized in lung tissue on calcium-ion stimulation, suggesting that locally generated **anandamide** participates in the intrinsic control of airway responsiveness. In support of this conclusion, the CB1 antagonist SR141716A enhances capsaicin-evoked bronchospasm and **cough**. Our results may account for the contrasting bronchial actions of cannabis-like drugs in humans, and provide a framework for the development of more selective cannabinoid-based agents for the treatment of respiratory pathologies.
ST **anandamide** airway bidirectional responsiveness cannabinoid receptor
IT Cannabinoid receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(CB1; bidirectional control of airway responsiveness by endogenous cannabinoids)
IT **Respiratory tract**
(bidirectional control of airway responsiveness by endogenous

cannabinoids)

IT **94421-68-8, Anandamide**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)
(bidirectional control of airway responsiveness by endogenous cannabinoids)

RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Abboud, R; Chest 1976, V70, P480 HCAPLUS
(2) Barnes, P; Physiol Rev 1992, V72, P699 HCAPLUS
(3) Bolster, D; Eur J Pharmacol 1995, V276, PR1
(4) Cadas, H; J Neurosci 1997, V17, P1226 HCAPLUS
(5) Calignano, A; Nature 1998, V394, P277 HCAPLUS
(6) Coutts, A; Br J Pharmacol 1997, V121, P1557 HCAPLUS
(7) Csiffary, A; Brain Res 1990, V506, P215 HCAPLUS
(8) Desarnaud, F; J Biol Chem 1995, V270, P6030 HCAPLUS
(9) Devane, W; Science 1992, V258, P1946 HCAPLUS
(10) Di Marzo, V; Nature 1994, V372, P686 HCAPLUS
(11) Giuffrida, A; Anal Biochem 2000, V280, P87 HCAPLUS
(12) Ishac, E; Br J Pharmacol 1996, V118, P2023 HCAPLUS
(13) Iversen, L; The Science of Marijuana 2000
(14) Karlsson, J; Pulmonary Pharmacol Ther 1999, V12, P215 HCAPLUS
(15) Katona, I; J Neurosci 1999, V19, P4544 HCAPLUS
(16) Landsman, R; Eur J Pharmacol 1997, V334, PR1 HCAPLUS
(17) Piomelli, D; Trends Pharmacol Sci 2000, V21, P218 HCAPLUS
(18) Rice, W; Eur J Pharmacol 1997, V327, P227 HCAPLUS
(19) Richardson, J; Pain 1998, V75, P111 HCAPLUS
(20) Rinaldi-Carmona, M; FEBS Lett 1994, V350, P240 HCAPLUS
(21) Rinaldi-Carmona, M; J Pharmacol Exp Ther 1998, V284, P644 HCAPLUS
(22) Samhoun, M; Prostaglandins 1984, V27, P711 HCAPLUS
(23) Sugiura, T; Eur J Biochem 1996, V240, P53 HCAPLUS
(24) Szallasi, A; Pharmacol Rev 1999, V51, P159 HCAPLUS
(25) Tashkin, D; Am Rev Respir Dis 1975, V112, P377 MEDLINE
(26) Tashkin, D; Am Rev Respir Dis 1977, V115, P57 HCAPLUS
(27) Vachon, L; New Engl J Med 1973, V288, P985 HCAPLUS
(28) Van Hoozen, B; Clin Rev Allergy Immunol 1997, V15, P243 MEDLINE
(29) Widdicombe, J; Respir Physiol 1998, V114, P5 MEDLINE
(30) Zygmunt, P; Trends Pharmacol Sci 2000, V21, P43 HCAPLUS

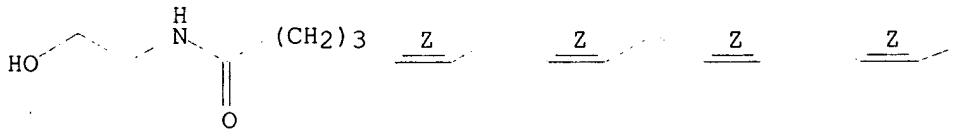
IT **94421-68-8, Anandamide**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)
(bidirectional control of airway responsiveness by endogenous cannabinoids)

RN 94421-68-8 HCAPLUS

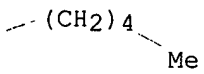
CN 5,8,11,14-Eicosatetraenamide, N-(2-hydroxyethyl)-, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



L76 ANSWER 9 OF 10 HCAPLUS COPYRIGHT 2003 ACS on STN
AN 1998:511815 HCAPLUS
DN 129:285829
ED Entered STN: 18 Aug 1998
TI Pulmonary actions of **anandamide**, an endogenous cannabinoid receptor agonist, in guinea pigs
AU Stengel, Peter W.; Rippy, Marian K.; Cockerham, Sandra L.; Devane, William A.; Silbaugh, Steven A.
CS Neuroscience Research, Lilly Research Laboratories, Eli Lilly, Lilly Corporate Center, Indianapolis, IN, USA
SO European Journal of Pharmacology (1998), 355(1), 57-66
CODEN: EJPHAZ; ISSN: 0014-2999
PB Elsevier Science B.V.
DT Journal
LA English
CC 1-9 (Pharmacology)
AB **Anandamide** (**arachidonylethanolamide**) was tested for bronchodilator and anti-inflammatory activities. Conscious guinea pigs were given cumulative i.v. doses of **anandamide** (1.0, 3.0, and 10.0 mg/kg) to assess its effect on dynamic compliance (Cdyn), total pulmonary resistance (RL), tidal volume (VT) and breathing frequency (f). Other guinea pigs were exposed to an aerosol of A23187 (6S-[6α(2S*,3S*),8β(R*),9β,11α]-5-(methylamino)-2-[[3,9,11-trimethyl-8-[1-methyl-2-oxo-2-(1H-pyrrol-2-yl)ethyl]-1,7-dioxaspiro[5.5]undec-2-yl]methyl]-4-benzoxazolecarboxylic acid) until Cdyn decreased by 50% (.apprx.5 min) and at 20 min, cumulative i.v. doses of **anandamide** (1.0, 3.0, and 10.0 mg/kg) were administered and reversal of Cdyn examined After the final dose of **anandamide**, the animals were killed and excised lung gas vols. (ELGV), i.e., pulmonary gas trapping, measured. Other animals were treated i.v. with **anandamide** (10.0 mg/kg), exposed to an aerosol of A23187 until labored breathing began, and then killed 1 h later. **Anandamide** did not significantly affect Cdyn, RL, VT and f. ELGV values of **anandamide**-treated guinea pigs were not different from those of vehicle-treated animals. **Anandamide** failed to reverse A23187-induced decreases in Cdyn and to reduce A23187-associated ELGV increases. Also, it did not prevent the prolonged airway obstruction caused by A23187. Histol. evaluation revealed that **anandamide** significantly reduced A23187-related airway epithelial injury and pulmonary leukocytosis. However, it did not prevent A23187-induced peribronchiolar granulocytic accumulation. Our results suggest that in vivo **anandamide** has minimal direct airway smooth muscle-related actions, however it may possess modest anti-inflammatory properties.
ST lung injury A23187 **anandamide**
IT **Respiratory tract**
(epithelium, A23187-induced injury; pulmonary actions of **anandamide** in guinea pigs with A23187-induced injury)
IT Anti-inflammatory agents
Lung
(pulmonary actions of **anandamide** in guinea pigs with A23187-induced injury)
IT **94421-68-8, Anandamide**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)

(pulmonary actions of **anandamide** in guinea pigs with A23187-induced injury)

RE.CNT 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Ackerman, N; Toxicol Appl Pharmacol 1977, V41, P321 HCAPLUS
(2) Amdur, M; J Appl Physiol 1958, V192, P364 MEDLINE
(3) Audette, C; Life Sci 1990, V47, P753 HCAPLUS
(4) Burstein, S; J Med Chem 1992, V35, P3135 HCAPLUS
(5) Childers, S; Biochem Pharmacol 1994, V47, P711 HCAPLUS
(6) Crawley, J; Pharmacol Biochem Behav 1993, V46, P967 HCAPLUS
(7) Deutsch, D; Biochem Pharmacol 1993, V46, P791 HCAPLUS
(8) Devane, W; Science 1992, V258, P1946 HCAPLUS
(9) Dewey, W; Pharmacol Rev 1986, V38, P151 HCAPLUS
(10) Felder, C; Proc Natl Acad Sci 1993, V90, P7656 HCAPLUS
(11) Fride, E; Eur J Pharmacol 1993, V231, P313 HCAPLUS
(12) Ho, P; Pharmacologist 1979, V21, P154
(13) Hollister, L; Pharmacol Rev 1986, V38, P1 HCAPLUS
(14) Kosersky, D; Eur J Pharmacol 1973, V24, P1 HCAPLUS
(15) Kriseman, T; J Pharmacol Exp Ther 1986, V239, P395 HCAPLUS
(16) Lefort, J; Br J Pharmacol 1978, V63, P35 HCAPLUS
(17) Mackie, K; Mol Pharmacol 1993, V44, P498 HCAPLUS
(18) Mercer, T; Am Ind Hyg Assoc 1968, V29, P66 MEDLINE
(19) Mercer, T; J Aerosol Sci 1970, V1, P9
(20) Misawa, M; Jpn J Pharmacol 1989, V51, P446 HCAPLUS
(21) Omeir, R; Life Sci 1995, V56, P1999 HCAPLUS
(22) Patterson, R; J Clin Invest 1979, V67, P67
(23) Salari, H; J Exp Med 1985, V162, P1904 HCAPLUS
(24) Sautebin, L; J Pharmacol Exp Ther 1985, V234, P217 MEDLINE
(25) Silbaugh, S; J Pharmacol Methods 1987, V18, P295 HCAPLUS
(26) Silbaugh, S; J Toxicol Environ Health 1981, V7, P339 HCAPLUS
(27) Smith, P; J Pharmacol Exp Ther 1994, V270, P219 HCAPLUS
(28) Sofia, R; J Pharmacol Exp Ther 1973, V186, P646 HCAPLUS
(29) Stengel, P; Agents Actions 1991, V32, P270 HCAPLUS
(30) Stengel, P; J Pharmacol Exp Ther 1989, V248, P1084 HCAPLUS
(31) Stengel, P; Prostaglandins 1987, V33, P567 HCAPLUS
(32) Stengel, P; Respir Physiol 1986, V63, P129 MEDLINE
(33) Tashkin, D; Am Rev Respir Dis 1975, V112, P377 MEDLINE
(34) Tashkin, D; Am Rev Respir Dis 1977, V115, P57 HCAPLUS
(35) Tashkin, D; N Eng J Med 1973, V289, P336 MEDLINE
(36) Vachon, L; N Eng J Med 1973, V288, P985 HCAPLUS
(37) Vogel, Z; J Neurochem 1993, V61, P352 HCAPLUS
(38) Wiley, J; Eur J Pharmacol 1995, V276, P49 HCAPLUS

IT **94421-68-8, Anandamide**

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)

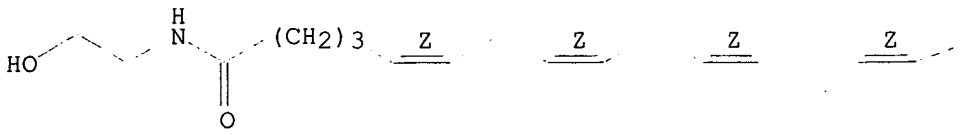
(pulmonary actions of **anandamide** in guinea pigs with A23187-induced injury)

RN 94421-68-8 HCAPLUS

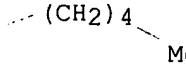
CN 5,8,11,14-Eicosatetraenamide, N-(2-hydroxyethyl)-, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



L76 ANSWER 10 OF 10 HCAPLUS COPYRIGHT 2003 ACS on STN
AN 1997:801212 HCAPLUS
DN 128:87707
ED Entered STN: 24 Dec 1997
TI Influence of interleukin 1α on superoxide anion, platelet activating factor release and phospholipase A2 activity of naive and sensitized guinea pig alveolar macrophages
AU Mugnai, Sabrina; Ciuffi, Mario; Maurizi, Manuela; Bindi, Daniela; Franchi-Micheli, Sergio; Zilletti, Lucilla
CS Department of Preclinical and Clinical Pharmacology "M. Aiazzi-Mancini", Florence, 50134, Italy
SO British Journal of Pharmacology (1997), 122(7), 1345-1352
CODEN: BJPCBM; ISSN: 0007-1188
PB Stockton Press
DT Journal
LA English
CC 15-5 (Immunochemistry)
AB We studied the effect exerted by hr-interleukin-1α (IL-1α) on responsiveness of alveolar macrophages (AM) from naive and sensitized guinea-pigs, through O2- production (by ferricytochrome C reduction), platelet-activating factor (PAF) release (by platelet aggregation), prostaglandin E2 (PGE2) release (by a RIA), and cytosolic phospholipase A2 (cPLA2) activity (by hydrolysis of radioactive substrate). In naive guinea-pig AM, 0.06 nM hr-IL-1α pretreatment decreased by 65% O2- release stimulated with 10 nM fMLP. In contrast, O2- production was not affected in sensitized guinea-pig AM. O2- release elicited by fMLP stimulation in both cell groups was affected by PLA2 inhibitors (10 μM bromophenacyl bromide, BPB or 10 μM methylprednisolone, MP). In contrast, 10 μM **arachidonyl trifluoromethyl ketone** (AACOCF3), a cPLA2 inhibitor, was ineffective. In naive AM, PAF release was elicited by hr-IL-1α pretreatment and by sep. fMLP-stimulation, but when the stimulus was added to hr-IL-1α-pretreated cells inhibition of PAF release was observed In sensitized AM, PAF release was lower than that found in naive guinea-pig AM in both hr-IL-1α-pretreated and fMLP-stimulated cells. PGE2 release was unaffected by hr-IL-1α pretreatment and it was decreased by fMLP in both naive and sensitized AMs. The latter released less PGE2 than naive cells in basal conditions and after fMLP treatment. Sensitized AM showed a greater cPLA2 activity in all exptl. conditions in comparison to naive cells. CPLA2 activity assayed in the cytosolic fraction was found to be enhanced by hr-IL-1α pretreatment and by fMLP stimulation in naive but not in sensitized AM. However, when the stimulus was added to hr-IL-1α-pretreated cells we observed a decrease in cPLA2 activity in the cytosol and an increase in the membranes, thus suggesting a translocation of enzymic activity. In conclusion, hr-IL-1α can modulate the responsiveness of AM from naive and sensitized guinea-pigs, as suggested by changes found in the release of PAF and O2- and in cPLA2 activity; therefore, sensitization itself may affect cellular responsiveness.
ST interleukin 1alpha macrophage superoxide PAF cPLA2
IT Macrophage
(alveolar; influence of interleukin 1α on superoxide anion, platelet activating factor release and phospholipase A2 activity of naive and sensitized guinea pig alveolar macrophages)

IT Respiration, animal
(burst; influence of interleukin 1α on superoxide anion, platelet activating factor release and phospholipase A2 activity of naive and sensitized guinea pig alveolar macrophages)
IT **Respiratory tract**
(**disease, hypersensitivity**; influence of interleukin 1α on superoxide anion, platelet activating factor release and phospholipase A2 activity of naive and sensitized guinea pig alveolar macrophages)
IT Allergy
(hypersensitivity, **respiratory tract**; influence of interleukin 1α on superoxide anion, platelet activating factor release and phospholipase A2 activity of naive and sensitized guinea pig alveolar macrophages)
IT Interleukin 1α
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(influence of interleukin 1α on superoxide anion, platelet activating factor release and phospholipase A2 activity of naive and sensitized guinea pig alveolar macrophages)
IT Lung
(macrophage; influence of interleukin 1α on superoxide anion, platelet activating factor release and phospholipase A2 activity of naive and sensitized guinea pig alveolar macrophages)
IT 9001-84-7, Phospholipase A2
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(influence of interleukin 1α on superoxide anion, platelet activating factor release and phospholipase A2 activity of naive and sensitized guinea pig alveolar macrophages)
IT 65154-06-5, Platelet activating factor
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(influence of interleukin 1α on superoxide anion, platelet activating factor release and phospholipase A2 activity of naive and sensitized guinea pig alveolar macrophages)
IT 11062-77-4, Superoxide
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(influence of interleukin 1α on superoxide anion, platelet activating factor release and phospholipase A2 activity of naive and sensitized guinea pig alveolar macrophages)
RE.CNT 51 THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Adams, D; Inflammation:Basic Principles and Clinical Correlates 1992, P637
(2) Angel, J; Eur J Biochem 1994, P125 HCAPLUS
(3) Bazan, N; Nature 1995, V374, P501 HCAPLUS
(4) Beusenberg, F; Biochem Pharmacol 1991, V42, P485 HCAPLUS
(5) Bomalaski, J; J Immunol 1992, V148, P155 HCAPLUS
(6) Bromberg, Y; Cell Immunol 1983, V79, P240 HCAPLUS
(7) Brunelleschi, S; Br J Pharmacol 1992, V107, P964 HCAPLUS
(8) Bussolino, F; Eur J Immunol 1994, V24, P3131 HCAPLUS
(9) Ciuffi, M; Biochem Pharmacol 1996, V52, P97 HCAPLUS
(10) Clark, J; Cell 1991, V65, P1043 HCAPLUS
(11) Dale, M; Immunology 1965, V8, P435 MEDLINE
(12) Dennis, E; Adv Prostaglandin Thromboxane Leukotriene Res 1995, V23, P75 HCAPLUS
(13) Dinarello, C; Blood 1991, V77, P1627 HCAPLUS
(14) Duke, E; Br J Pharmacol 1986, V88, P463
(15) Dularay, B; J Leukoc Biol 1990, V47, P158 HCAPLUS
(16) Durstin, M; Biochemistry 1994, V91, P3142 HCAPLUS

(17) Eliakim, R; Gastroenterology 1988, V95, P1167 MEDLINE
(18) Fitzgerald, M; Eur J Pharmacol 1989, V164, P539 HCAPLUS
(19) Fuller, R; Asthma Basic Mechanisms and Clinical Management 1992, P99
(20) Georgilis, K; J Immunol 1987, V138, P3403 HCAPLUS
(21) Glaser, K; Trends Pharmacol Sci 1993, V14, P92 HCAPLUS
(22) Gronich, J; J Clin Invest 1994, V93, P1224 HCAPLUS
(23) Harris, C; J Immunol 1991, V147, P149 HCAPLUS
(24) Henderson, L; Biochem J 1989, V264, P249 HCAPLUS
(25) Hidi, R; J Immunol 1993, V151, P5613 HCAPLUS
(26) Hulkower, K; Biochem Biophys Res Commun 1992, V184, P712 HCAPLUS
(27) Kadiri, C; Mol Pharmacol 1990, V38, P418 HCAPLUS
(28) Kramer, R; Agents Actions 1995, V46, P65 HCAPLUS
(29) Lands, W; Free Radicals in Biology 1984, P39 HCAPLUS
(30) Lin, L; J Biol Chem 1992, V267, P23451 HCAPLUS
(31) Lowry, O; J Biol Chem 1951, V193, P265 HCAPLUS
(32) Massey, V; Biochem Biophys Acta 1959, V34, P255 HCAPLUS
(33) Mayer, R; FASEB J 1993, V7, P339 HCAPLUS
(34) Mukherjee, A; Biochem Pharmacol 1994, V48, P1 HCAPLUS
(35) Myrvik, Q; J Immunol 1961, V86, P128 MEDLINE
(36) M'Rini, C; Biochim Biophys Acta 1994, V1213, P46 HCAPLUS
(37) Poulter, L; Immunol Today 1994, V15, P258 MEDLINE
(38) Rankin, J; J Allergy Clin Immunol 1989, V83, P722 MEDLINE
(39) Riendeau, D; J Biol Chem 1994, V22, P15619
(40) Sakata, A; J Immunol 1987, V138, P4353 HCAPLUS
(41) Sample, A; J Leukoc Biol 1991, V49, P107 HCAPLUS
(42) Sane, A; J Leukoc Biol 1996, V60, P704 HCAPLUS
(43) Schalkwijk, C; FEBS Letts 1993, V333, P339 HCAPLUS
(44) Schutze, S; J Leukoc Biol 1994, V56, P533 MEDLINE
(45) Smith, H; Pulmonary Pharmacol 1989, V2, P59 MEDLINE
(46) Smolen, J; Biochem Pharmacol 1980, V29, P533 HCAPLUS
(47) Snyder, F; Biochim Biophys Acta 1995, V1254, P231 HCAPLUS
(48) Street, I; Biochemistry 1993, V32, P5935 HCAPLUS
(49) Tao, W; J Leukoc Biol 1993, V53, P679 HCAPLUS
(50) Wu, T; J Clin Invest 1994, V93, P571 HCAPLUS
(51) Zimmerman, G; Inflammation:Basic Principles and Clinical Correlates 1992

=> => d all hitstr tot

L86 ANSWER 1 OF 6 HCAPLUS COPYRIGHT 2003 ACS on STN
AN 2000:853966 HCAPLUS
DN 134:176348
ED Entered STN: 06 Dec 2000
TI Endocannabinoids and fatty acid amides in cancer, inflammation and related disorders
AU **De Petrocellis, L.**; Melck, D.; Bisogno, T.; Di Marzo, V.
CS Istituto di Cibernetica, Consiglio Nazionale delle Ricerche, Arco Felice, Naples, 80072, Italy
SO Chemistry and Physics of Lipids (**2000**), **108**(1-2), **191**-209
CODEN: CPLIA4; ISSN: 0009-3084
PB Elsevier Science Ireland Ltd.
DT Journal; General Review
LA English
CC 14-0 (Mammalian Pathological Biochemistry)
AB A review, with many refs. The long history of the medicinal use of Cannabis sativa and, more recently, of its chemical constituents, the cannabinoids, suggests that also the endogenous ligands of cannabinoid receptors, the endocannabinoids, and, particularly, their derivs. may be used as therapeutic agents. Studies aimed at correlating the tissue and body fluid levels of endogenous cannabinoid-like mols. with pathol. conditions have been started and may lead to identify those diseases that can be alleviated by drugs that either mimic or antagonize the action of

these substances, or modulate their biosynthesis and degradation Hints for the therapeutic applications of endocannabinoids, however, can be obtained also from our previous knowledge of marijuana medicinal properties. In this article, we discuss the anti-tumor and anti-inflammatory activity of: (1) the endocannabinoids **anandamide** (arachidonoylethanolamide) and 2-arachidonoyl glycerol; (2) the bioactive fatty acid amides palmitoylethanolamide and oleamide; and (3) some synthetic derivs. of these compds., such as the N-acyl-vanillyl-amines. Furthermore, the possible role of cannabimimetic fatty acid derivs. in the pathol. consequences of cancer and inflammation, such as cachexia, wasting syndrome, chronic pain and local vasodilation, will be examined

ST review endocannabinoid fatty acid amide cancer inflammation

IT Inflammation
Neoplasm
(endocannabinoids and fatty acid amides in cancer, inflammation and related disorders)

IT Cannabinoids
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(endocannabinoids and fatty acid amides in cancer, inflammation and related disorders)

IT Cannabinoid receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(endocannabinoids; endocannabinoids and fatty acid amides in cancer, inflammation and related disorders)

IT Amides, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(fatty; endocannabinoids and fatty acid amides in cancer, inflammation and related disorders)

RE.CNT 104 THERE ARE 104 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Arnone, M; Psychopharmacology 1997, V132, P104 HCAPLUS
(2) Baek, S; Arch Pharm Res 1998, V21, P353 HCAPLUS
(3) Beaulieu, P; Eur J Pharmacol 2000, V396, P85 HCAPLUS
(4) Ben-Shabat, S; Eur J Pharmacol 1998, V353, P23 HCAPLUS
(5) Berdyshev, E; Eur J Pharmacol 1997, V330, P231 HCAPLUS
(6) Berdyshev, E; Life Sci 1998, V63, PPL125 HCAPLUS
(7) Bisogno, T; Biochem Biophys Res Commun 1999, V256, P377 HCAPLUS
(8) Bisogno, T; Eur J Biochem 1998, V254, P634 HCAPLUS
(9) Bisogno, T; J Biol Chem 1997, V272, P3315 HCAPLUS
(10) Boger, D; Curr Pharm Des 1998, V4, P303 HCAPLUS
(11) Bruera, E; Oncology 1992, V49(Suppl 2), P35
(12) Burstein, S; Nature 1997, V386, P320 HCAPLUS
(13) Burstein, S; Pharmacol Ther 1999, V82, P87 HCAPLUS
(14) Calignano, A; Nature 1998, V394, P277 HCAPLUS
(15) Carchman, R; Cancer Res 1976, V36, P95 HCAPLUS
(16) Colombo, G; Life Sci 1998, V63, PPL113 HCAPLUS
(17) Cravatt, B; Science 1995, V268, P1506 HCAPLUS
(18) De Petrocellis, L; Neuroscience 1999, V92, P377 HCAPLUS
(19) De Petrocellis, L; Proc Natl Acad Sci 1998, V95, P8375 HCAPLUS
(20) Descamps, S; J Biol Chem 1998, V273, P16659 HCAPLUS
(21) Deutsch, D; Biochem Pharmacol 1993, V46, P791 HCAPLUS
(22) Devane, W; Science 1992, V258, P1946 HCAPLUS
(23) Di Marzo, V; Biochem J 1996, V316, P977 HCAPLUS
(24) Di Marzo, V; Biochem J 1998, V331, P15 HCAPLUS
(25) Di Marzo, V; Biochim Biophys Acta 1998, V1392, P153 HCAPLUS
(26) Di Marzo, V; Curr Med Chem 1999, V6, P721 HCAPLUS
(27) Di Marzo, V; Eur J Biochem 1999, V264, P258 HCAPLUS
(28) Di Marzo, V; FEBS Lett 1998, V436, P449 HCAPLUS
(29) Di Marzo, V; J Neurochem 2000, V74, P1627 HCAPLUS
(30) Di Marzo, V; Nature 1994, V372, P686 HCAPLUS
(31) Di Marzo, V; Trends Neurosci 1998, V21, P521 HCAPLUS

(32) Dye, I; Hum Reprod 1997, V12, P1142
(33) Ehrhard, P; Proc Natl Acad Sci 1993, V90, P5423 HCAPLUS
(34) Facci, L; Proc Natl Acad Sci 1995, V92, P3376 HCAPLUS
(35) Farquhar-Smith, W; Mol Cell Neurosci 2000, V15, P510 HCAPLUS
(36) Fenig, E; Clin Cancer Res 1997, V3, P135 HCAPLUS
(37) Galve-Roperh, I; Nat Med 2000, V6, P313 HCAPLUS
(38) Gardner, E; Neurobiol Dis 1998, V5, P502 HCAPLUS
(39) Geldof, A; Prostate Cancer and Prostatic Diseases 1998, V5, P236
(40) Gonzalez, S; Biochem Biophys Res Commun 2000, V270, P260 HCAPLUS
(41) Gonzalez, S; Neuroendocrinology 1999, V70, P137 HCAPLUS
(42) Gorter, R; Forsch Komplementarmed 1999, V6(Suppl 3), P21
(43) Grinspoon, L; J Am Med Assoc 1995, V273, P1875 MEDLINE
(44) Grotenhermen, F; Lancet 1998, V351, P758 MEDLINE
(45) Hanus, L; J Med Chem 1993, V36, P3032 HCAPLUS
(46) Hanus, L; Proc Natl Acad Sci 1999, V96, P14228 HCAPLUS
(47) Hao, S; Eur J Pharmacol 2000, V392, P147 HCAPLUS
(48) Hillard, C; J Lipid Res 1997, V38, P2383 HCAPLUS
(49) Hohmann, A; Neuroscience 1999, V90, P923 HCAPLUS
(50) Ishioka, N; J Pharmacol Exp Ther 1999, V289, P245 HCAPLUS
(51) Jaggar, S; Neurosci Lett 1998, V253, P123 HCAPLUS
(52) Jaggar, S; Pain 1998, V76, P189 HCAPLUS
(53) Jarai, Z; Hypertension 2000, V35, P679 HCAPLUS
(54) Jarai, Z; Proc Natl Acad Sci 1999, V96, P14136 HCAPLUS
(55) Jbilo, O; FEBS Lett 1999, V448, P273 HCAPLUS
(56) Johnson, D; Anticancer Drugs 1995, V6, P471 HCAPLUS
(57) Khanolkar, A; Life Sci 1999, V65, P607 HCAPLUS
(58) Kondo, S; Arch Biochem Biophys 1998, V354, P303 HCAPLUS
(59) Lambert, D; Biochim Biophys Acta 1999, V1440, P266 HCAPLUS
(60) Lambert, D; Curr Med Chem 1999, V6, P757 HCAPLUS
(61) Landsman, R; Eur J Pharmacol 1997, V334, PR1 HCAPLUS
(62) Langstein, J; Res Immunol 1996, V147, P389 HCAPLUS
(63) Maccarrone, M; FEBS Lett 1999, V447, P277 HCAPLUS
(64) Maccarrone, M; FEBS Letts 2000, V468, P176 HCAPLUS
(65) Maccarrone, M; J Biol Chem 1998, V273, P32332 HCAPLUS
(66) Maccarrone, M; J Biol Chem 2000, V275, P13484 HCAPLUS
(67) Manzanares, J; Trends Pharmacol Sci 1999, V20, P287 HCAPLUS
(68) Martin, W; Pain 1999, V82, P199 HCAPLUS
(69) Matsuda, L; Cannabinoid Receptors 1995, P117 HCAPLUS
(70) Mazzari, S; Eur J Pharmacol 1996, V300, P227 HCAPLUS
(71) Mechoulam, R; Biochem Pharmacol 1995, V50, P83 HCAPLUS
(72) Mechoulam, R; Cannabinoids as Therapeutic Agents 1986, P1
(73) Mechoulam, R; Eur J Pharmacol 1998, V359, P1 HCAPLUS
(74) Mechoulam, R; Nature 1997, V389, P25 HCAPLUS
(75) Melck, D; Biochem Biophys Res Commun 1999, V262, P275 HCAPLUS
(76) Melck, D; Endocrinology 2000, V141, P118 HCAPLUS
(77) Melck, D; FEBS Lett 1999, V463, P235 HCAPLUS
(78) Molina-Holgado, F; FEBS Lett 1998, V433, P139 HCAPLUS
(79) Morre, D; Proc Natl Acad Sci 1995, V92, P1831 HCAPLUS
(80) Munson, A; J Natl Cancer Inst 1975, V55, P597 HCAPLUS
(81) Murison, G; Proc Natl Acad Sci 1987, V84, P5414 HCAPLUS
(82) Pestonjamasp, V; Biochim Biophys Acta 1998, V1394, P249 HCAPLUS
(83) Richardson, J; Eur J Pharmacol 1998, V345, P145 HCAPLUS
(84) Ruiz, L; FEBS Lett 1999, V458, P400 HCAPLUS
(85) Sanchez, C; FEBS Lett 1998, V436, P6 HCAPLUS
(86) Schmid, H; Prog Lipid Res 1990, V29, P1 HCAPLUS
(87) Simiand, J; Behav Pharmacol 1998, V9, P179 HCAPLUS
(88) Skaper, S; Proc Natl Acad Sci 1996, V93, P3984 HCAPLUS
(89) Smart, D; Br J Pharmacol 2000, V129, P227 HCAPLUS
(90) Smith, F; Pharmacol Biochem Behav 1998, V60, P183 HCAPLUS
(91) Stengel, P; Eur J Pharmacol 1998, V355, P57 HCAPLUS
(92) Sugiura, T; Biochem Biophys Res Commun 1995, V215, P89 HCAPLUS
(93) Sugiura, T; Biochem Biophys Res Commun 1998, V243, P838 HCAPLUS
(94) Szallasi, A; Pharmacol Rev 1999, V51, P159 HCAPLUS

(95) Tahir, S; Biochem Cell Biol 1992, V70, P1159 HCAPLUS
(96) Tucker, A; Res Commun Chem Pathol Pharmacol 1997, V17, P703
(97) Varga, K; FASEB J 1998, V12, P1035 HCAPLUS
(98) White, A; J Natl Cancer Inst 1976, V56, P655 HCAPLUS
(99) Williams, C; Psychopharmacology 1999, V143, P315 HCAPLUS
(100) Willoughby, K; J Pharmacol Exp Ther 1997, V282, P243 HCAPLUS
(101) Wilson, R; Cell Biol Int 1996, V20, P147 HCAPLUS
(102) Yousif, M; Pharmacol Res 1999, V40, P415 HCAPLUS
(103) Zygmunt, P; Nature 1999, V400, P452 HCAPLUS
(104) Zygmunt, P; Trends Pharmacol Sci 2000, V21, P43 HCAPLUS

L86 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 2003 ACS on STN
AN 2000:853959 HCAPLUS
DN 134:69099
ED Entered STN: 06 Dec 2000
TI 2-Arachidonoylglycerol and the cannabinoid receptors
AU **Sugiura, T.**; Waku, K.
CS Faculty of Pharmaceutical Sciences, Teikyo University, Tsukui-gun, Sagamiko, Kanagawa, 199-0195, Japan
SO Chemistry and Physics of Lipids (**2000**), **108**(1-2), **89**-106
CODEN: CPLIA4; ISSN: 0009-3084
PB Elsevier Science Ireland Ltd.
DT Journal; General Review
LA English
CC 13-0 (Mammalian Biochemistry)
Section cross-reference(s): 2
AB A review, with .apprx.115 refs. 2-Arachidonoylglycerol (2-AG) is a unique mol. species of monoacylglycerol isolated from rat brain and canine gut as an endogenous cannabinoid receptor ligand. 2-AG binds to the cannabinoid receptors (CB1 and CB2) and exhibits a variety of cannabimimetic activities in vitro and in vivo. Recently, we found that 2-AG induces Ca2+ transients in NG108-15 cells, which express the CB1 receptor, and in HL-60 cells, which express the CB2 receptor, through a cannabinoid receptor- and Gi/Go-dependent mechanism. Based on the results of structure-activity relationship expts., we concluded that 2-AG but not **anandamide** is the natural ligand for both the CB1 and the CB2 receptors and both receptors are primarily 2-AG receptors. Evidences are gradually accumulating that 2-AG is a physiol. essential mol., although further detailed studies appear to be necessary to determine relative importance of 2-AG and **anandamide** in various animal tissues. In this review, we described mainly our previous and current exptl. results, as well as those of others, concerning the tissue levels, bioactions and metabolism of 2-AG.
ST review arachidonoylglycerol cannabinoid receptor
IT Cannabinoid receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(arachidonoylglycerol and the cannabinoid receptors)
IT 53847-30-6
RL: BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence); PROC (Process)
(arachidonoylglycerol and the cannabinoid receptors)
RE.CNT 103 THERE ARE 103 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

(1) An, S; Biochem Biophys Res Commun 1997, V231, P619 HCAPLUS
(2) Bell, L; Proc Natl Acad Sci 1979, V76, P3238
(3) Ben-Shabat, S; Eur J Pharmacol 1998, V353, P23 HCAPLUS
(4) Berrendero, F; Synaps 1999, V33, P181 HCAPLUS
(5) Bisogno, T; Arch Biochem Biophys 1999, V370, P300 HCAPLUS
(6) Bisogno, T; Biochem Biophys Res Commun 1999, V256, P377 HCAPLUS
(7) Bisogno, T; Biochem J 1997, V322, P671 HCAPLUS

(8) Bisogno, T; J Neurochem 1999, V72, P2113 HCAPLUS
(9) Cadas, H; J Neurosci 1997, V17, P1226 HCAPLUS
(10) Carayon, P; Blood 1998, V92, P3605 HCAPLUS
(11) De Petrocellis, L; Proc Natl Acad Sci 1998, V95, P8375 HCAPLUS
(12) Derocq, J; FEBS Lett 1995, V369, P177 HCAPLUS
(13) Deutsch, D; Biochem Pharmacol 1993, V46, P791 HCAPLUS
(14) Deutsch, D; J Clin Invest 1997, V100, P1538 HCAPLUS
(15) Devane, W; Mol Pharmacol 1988, V34, P605 HCAPLUS
(16) Devane, W; Proc Natl Acad Sci 1994, V91, P6698 HCAPLUS
(17) Devane, W; Science 1992, V258, P1946 HCAPLUS
(18) Dewey, W; Pharmacol Rev 1986, V38, P151 HCAPLUS
(19) Di Marzo, V; Biochem Biophys Res Commun 1996, V227, P281 HCAPLUS
(20) Di Marzo, V; Biochem J 1998, V331, P15 HCAPLUS
(21) Di Marzo, V; Biochemistry 1998, V63, P13 HCAPLUS
(22) Di Marzo, V; Biochim Biophys Acta 1998, V1392, P153 HCAPLUS
(23) Di Marzo, V; Eur J Biochem 1999, V264, P258 HCAPLUS
(24) Di Marzo, V; Lipids 1999, V34, PS319 HCAPLUS
(25) Di Marzo, V; Nature 1994, V372, P686 HCAPLUS
(26) Di Marzo, V; Neurobiol Dis 1998, V5, P386 HCAPLUS
(27) Di Marzo, V; Trends Neurosci 1998, V21, P521 HCAPLUS
(28) Facci, L; Proc Natl Acad Sci 1995, V92, P3376 HCAPLUS
(29) Farooqui, A; Biochem Biophys Res Commun 1990, V166, P1001 HCAPLUS
(30) Farooqui, A; Brain Res 1993, V604, P180 HCAPLUS
(31) Felder, C; FEBS Lett 1996, V393, P231 HCAPLUS
(32) Felder, C; Mol Pharmacol 1992, V42, P838 HCAPLUS
(33) Fulton, D; J Pharmacol Exp Ther 1998, V286, P1146 HCAPLUS
(34) Galiegue, S; Eur J Biochem 1995, V232, P54 HCAPLUS
(35) Gammon, C; J Neurochem 1989, V53, P95 HCAPLUS
(36) Giuffrida, A; Nat Neurosci 1999, V2, P358 HCAPLUS
(37) Gonsiorek, W; Mol Pharmacol 2000, V57, P1045 HCAPLUS
(38) Gonzalez, S; Neuroendocrinology 1999, V70, P137 HCAPLUS
(39) Goparaju, S; Biochem Pharmacol 1999, V57, P417 HCAPLUS
(40) Goparaju, S; FEBS Lett 1998, V422, P69 HCAPLUS
(41) Hansen, H; Biochim Biophys Acta 1995, V1258, P303 HCAPLUS
(42) Hasegawa-Sasaki, H; Biochem J 1985, V232, P99 HCAPLUS
(43) Hecht, J; J Cell Biol 1996, V135, P1071 HCAPLUS
(44) Herkenham, M; Cannabinoid Receptors 1995, P145 HCAPLUS
(45) Hillard, C; J Lipid Res 1997, V38, P2383 HCAPLUS
(46) Hollister, L; J Psychoactive Drugs 1992, V24, P159 MEDLINE
(47) Howlett, A; Cannabinoid Receptors 1995, P167 HCAPLUS
(48) Huang, S; Acta Pharmacol Sinica 1999, V20, P1098 HCAPLUS
(49) Ishac, E; Br J Pharmacol 1996, V118, P2023 HCAPLUS
(50) Jarai, Z; Hypertension 2000, V35, P679 HCAPLUS
(51) Jin, W; J Neurosci 1994, V14, P1920 HCAPLUS
(52) Kanoh, H; J Biol Chem 1986, V261, P5597 HCAPLUS
(53) Kempe, K; J Biol Chem 1996, V271, P17287 HCAPLUS
(54) Kondo, S; FEBS Lett 1998, V429, P152 HCAPLUS
(55) Kruszka, K; J Biol Chem 1994, V269, P14345 HCAPLUS
(56) Lee, M; J Pharmacol Exp Ther 1995, V275, P529 HCAPLUS
(57) Malinowska, B; Naunyn Schmiedeberg's Arch Pharmacol 1997, V356, P197 HCAPLUS
(58) Matsuda, L; Cannabinoid Receptors 1995, P117 HCAPLUS
(59) Matsuda, L; Nature 1990, V346, P561 HCAPLUS
(60) Mechoulam, R; Biochem Pharmacol 1995, V50, P83 HCAPLUS
(61) Mechoulam, R; Cannabinoid Receptors 1995, P233 HCAPLUS
(62) Mechoulam, R; Eur J Pharmacol 1998, V359, P1 HCAPLUS
(63) Mechoulam, R; Eur J Pharmacol 1998, V362, PR1 HCAPLUS
(64) Mechoulam, R; Marijuana/Cannabinoids: Neurobiology and Neurophysiology 1992, P1 HCAPLUS
(65) Melck, D; Endocrinology 2000, V141, P118 HCAPLUS
(66) Moriyama, T; J Biochem 1999, V125, P1077 HCAPLUS
(67) Munro, S; Nature 1993, V365, P61 HCAPLUS
(68) Nakane, S; Biol Pharm Bull 2000, V23, P758 HCAPLUS

(69) Ouyang, Y; Mol Pharmacol 1998, V53, P676 HCAPLUS
(70) Paria, B; Biol Reprod 1998, V58, P1490 HCAPLUS
(71) Piomelli, D; Neurobiol Dis 1998, V5, P462 HCAPLUS
(72) Plane, F; Br J Pharmacol 1997, V121, P1509 HCAPLUS
(73) Prescott, S; J Biol Chem 1983, V258, P764 HCAPLUS
(74) Randall, M; Biochem Biophys Res Commun 1996, V229, P114 HCAPLUS
(75) Rhee, S; J Biol Chem 1997, V272, P15045 HCAPLUS
(76) Schmid, P; Chem Phys Lipids 2000, V104, P185 HCAPLUS
(77) Schmid, P; FEBS Lett 1995, V385, P124
(78) Shim, Y; Biochem Cell Biol 1989, V67, P233 HCAPLUS
(79) Simpson, C; J Biol Chem 1991, V266, P15902 HCAPLUS
(80) Sinor, A; Neurosci Lett 2000, V278, P157 HCAPLUS
(81) Stella, N; Nature 1997, V388, P773 HCAPLUS
(82) Straiker, A; Proc Natl Acad Sci 1999, V96, P14565 HCAPLUS
(83) Sugiura, T; Arch Biochem Biophys 1994, V311, P358 HCAPLUS
(84) Sugiura, T; Biochem Biophys Res Commun 1995, V215, P89 HCAPLUS
(85) Sugiura, T; Biochem Biophys Res Commun 1996, V218, P113 HCAPLUS
(86) Sugiura, T; Biochem Biophys Res Commun 1996, V229, P58 HCAPLUS
(87) Sugiura, T; Biochem Biophys Res Commun 1997, V233, P207 HCAPLUS
(88) Sugiura, T; Biochem Biophys Res Commun 1998, V243, P838 HCAPLUS
(89) Sugiura, T; Biochem Biophys Res Commun 2000, V271, P654 HCAPLUS
(90) Sugiura, T; Biochim Biophys Acta 1999, V1440, P194 HCAPLUS
(91) Sugiura, T; Essential Fatty Acids and Eicosanoids 1998, P380 HCAPLUS
(92) Sugiura, T; Eur J Biochem 1996, V240, P53 HCAPLUS
(93) Sugiura, T; J Biochem 1997, V122, P890 HCAPLUS
(94) Sugiura, T; J Biol Chem 1999, V274, P2794 HCAPLUS
(95) Sugiura, T; J Biol Chem 2000, V275, P605 HCAPLUS
(96) Sugiura, T; Proc Jpn Conf Biochem Lipids 1994, V36, P71
(97) Suhara, Y; Chem Pharm Bull 2000, V48, P903 HCAPLUS
(98) Tokumura, A; Prog Lipid Res 1995, V34, P151 HCAPLUS
(99) Tsutsumi, T; Arch Biochem Biophys 1995, V317, P331 HCAPLUS
(100) Tsutsumi, T; Neurochem Res 1994, V19, P399 HCAPLUS
(101) Ueda, H; J Neurochem 1993, V61, P1874 HCAPLUS
(102) Ueda, N; J Biol Chem 1995, V270, P23823 HCAPLUS
(103) Varga, K; FASEB J 1998, V12, P1035 HCAPLUS

L86 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2003 ACS on STN
AN 1999:589648 HCAPLUS
DN 131:309751
ED Entered STN: 21 Sep 1999
TI Cytosolic phospholipase A2 activation is essential for β1 and β2 integrin-dependent adhesion of human eosinophils
AU **Zhu, Xiangdong**; Munoz, Nilda M.; Kim, Kwang Pyo; Sano, Hiroyuki; Cho, Wonhwa; Leff, Alan R.
CS Section of Pulmonary and Critical Care Medicine, Departments of Medicine, Pharmacological and Physiological Sciences, Pediatrics, Anesthesia, and Critical Care, and Committees on Clinical Pharmacology and Cell Physiology, Division of Biological Sciences, University of Chicago, Chicago, IL, 60637, USA
SO Journal of Immunology (**1999**), **163**(6), **3423**-3429
CODEN: JOIMA3; ISSN: 0022-1767
PB American Association of Immunologists
DT Journal
LA English
CC 15-9 (Immunochemistry)
AB The authors examined the role of cytosolic phospholipase A2 (cPLA2) during human eosinophil adherence to ICAM-1- or VCAM-1-coated plates. IL-5-stimulated eosinophils adhered to ICAM-1 through the β2 integrin CD11b/CD18, while nonstimulated eosinophils did not. By contrast, nonstimulated eosinophils adhered to VCAM-1 through the β1-integrin VLA-4/CD29. Both IL-5-induced adhesion to ICAM-1 and spontaneous adhesion to VCAM-1 corresponded temporally to cPLA2 phosphorylation, which

accompanied enhanced catalytic activity of cPLA2. The structurally unrelated cPLA2 inhibitors, **arachidonyl trifluoromethylketone** and surfactin, inhibited eosinophil adhesion to ICAM-1 and VCAM-1 in a concentration-dependent manner. Inhibition of secretory PLA2, 5-lipoxygenase, or cyclooxygenase did not affect eosinophil adhesion. Addition of arachidonic acid to eosinophils after cPLA2 inhibition with **arachidonyl trifluoromethylketone** or surfactin did not reverse the blockade of adhesion to ICAM-1 or VCAM-1. However, CV-6209, a receptor-specific antagonist of platelet-activating factor, inhibited all integrin-mediated adhesion. The activated conformation of CD11b as identified by the mAb, CBRM1/5, as well as quant. surface CD11b expression were up-regulated after IL-5 stimulation. However, cPLA2 inhibition neither prevented CBRM1/5 expression nor blocked surface Mac-1 up-regulation caused by IL-5. Apparently, cPLA2 activation and its catalytic product platelet-activating factor play an essential role in regulating β1 and β2 integrin-dependent adhesion of eosinophils. This blockade occurs even in the presence of up-regulated eosinophil surface integrin.

ST cytosolic phospholipase A2 integrin dependent adhesion eosinophil allergy

IT Cell adhesion molecules
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(ICAM-1 (intercellular adhesion mol. 1); cytosolic phospholipase A2 activation and platelet-activating factor are essential for β1 and β2 integrin-dependent adhesion of human eosinophils)

IT Cell adhesion molecules
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(VCAM-1; cytosolic phospholipase A2 activation and platelet-activating factor are essential for β1 and β2 integrin-dependent adhesion of human eosinophils)

IT Inflammation
(allergic; cytosolic phospholipase A2 activation and platelet-activating factor are essential for β1 and β2 integrin-dependent adhesion of human eosinophils)

IT Cytoplasm
(cytosol; cytosolic phospholipase A2 activation and platelet-activating factor are essential for β1 and β2 integrin-dependent adhesion of human eosinophils)

IT Asthma
Eosinophil
(cytosolic phospholipase A2 activation and platelet-activating factor are essential for β1 and β2 integrin-dependent adhesion of human eosinophils)

IT Cell adhesion
(eosinophil; cytosolic phospholipase A2 activation and platelet-activating factor are essential for β1 and β2 integrin-dependent adhesion of human eosinophils)

IT Integrins
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(β1; cytosolic phospholipase A2 activation and platelet-activating factor are essential for β1 and β2 integrin-dependent adhesion of human eosinophils)

IT Integrins
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(β2; cytosolic phospholipase A2 activation and platelet-activating factor are essential for β1 and β2 integrin-dependent adhesion of human eosinophils)

IT 65154-06-5, Platelet-activating factor
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)

(cytosolic phospholipase A2 activation and platelet-activating factor are essential for β1 and β2 integrin-dependent adhesion of human eosinophils)

IT 9001-84-7, Phospholipase A2
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(cytosolic; cytosolic phospholipase A2 activation and platelet-activating factor are essential for β1 and β2 integrin-dependent adhesion of human eosinophils)

RE.CNT 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Balsinde, J; J Biol Chem 1997, V272, P16069 HCAPLUS
(2) Bartemes, K; J Immunol 1999, V162, P2982 HCAPLUS
(3) Blom, M; Blood 1998, V91, P3037 HCAPLUS
(4) Bowton, D; Am J Respir Crit Care Med 1997, V155, P421 MEDLINE
(5) Carter, G; J Pharmacol Exp Ther 1991, V256, P929 HCAPLUS
(6) Clark, J; Cell 1991, V65, P1043 HCAPLUS
(7) de Carvalho, M; J Biol Chem 1996, V271, P6987 HCAPLUS
(8) Dennis, E; The Enzyme 1983, P307 HCAPLUS
(9) Durstin, M; Proc Natl Acad Sci USA 1994, V91, P3142 HCAPLUS
(10) Ebisawa, M; J Immunol 1992, V149, P4021 HCAPLUS
(11) Gleich, G; J Allergy Clin Immunol 1990, V85, P422 MEDLINE
(12) Hansel, T; J Immunol Methods 1991, V145, P105 MEDLINE
(13) Horie, S; J Immunol 1994, V152, P5457 HCAPLUS
(14) Jacobson, P; J Immunol 1993, V151, P5639 HCAPLUS
(15) Kato, M; Am J Respir Cell Mol Biol 1998, V18, P675 HCAPLUS
(16) Kim, K; Biochem Pharmacol 1998, V55, P975 HCAPLUS
(17) Kramer, R; J Biol Chem 1993, V268, P26796 HCAPLUS
(18) Laneuville, O; J Pharmacol Exp Ther 1994, V271, P927 HCAPLUS
(19) Leff, A; Am J Physiol 1991, V260, PL189 HCAPLUS
(20) Lefkowith, J; J Immunol 1992, V149, P1729 HCAPLUS
(21) Lin, L; Cell 1993, V72, P269 HCAPLUS
(22) Lundahl, J; J Leukocyte Biol 1993, V53, P336 HCAPLUS
(23) Marshall, L; J Biol Chem 1997, V272, P759 HCAPLUS
(24) Miura, K; J Allergy Clin Immunol 1998, V102, P512 HCAPLUS
(25) Murakami, M; J Biol Chem 1998, V273, P14411 HCAPLUS
(26) Nagata, M; Immunology 1995, V155, P2194 HCAPLUS
(27) Neeley, S; Am J Respir Cell Mol Biol 1993, V8, P633 HCAPLUS
(28) Nemenoff, R; J Biol Chem 1993, V268, P1960 HCAPLUS
(29) Rosenthal, M; Biochem Biophys Res Commun 1995, V208, P650 HCAPLUS
(30) Schweizer, R; J Leukocyte Biol 1996, V59, P347 HCAPLUS
(31) Street, I; Biochemistry 1993, V32, P5935 HCAPLUS
(32) Terashita, Z; J Pharmacol Exp Ther 1987, V242, P263 HCAPLUS
(33) Uozumi, N; Nature 1997, V390, P618 HCAPLUS
(34) Vadas, P; J Lipid Mediat 1993, V8, P1 HCAPLUS
(35) Walsh, G; Immunology 1990, V71, P258 HCAPLUS
(36) Weber, C; Proc Natl Acad Sci USA 1996, V93, P10939 HCAPLUS
(37) Wegner, C; Science 1990, V247, P456 HCAPLUS
(38) White, S; J Clin Invest 1993, V91, P2118 HCAPLUS
(39) Zhu, X; J Immunol Methods 1996, V199, P119 HCAPLUS

L86 ANSWER 4 OF 6 HCAPLUS COPYRIGHT 2003 ACS on STN
AN 1998:511815 HCAPLUS
DN 129:285829
ED Entered STN: 18 Aug 1998
TI Pulmonary actions of **anandamide**, an endogenous cannabinoid receptor agonist, in guinea pigs
AU **Stengel, Peter W.**; Rippy, Marian K.; Cockerham, Sandra L.; Devane, William A.; Silbaugh, Steven A.
CS Neuroscience Research, Lilly Research Laboratories, Eli Lilly, Lilly Corporate Center, Indianapolis, IN, USA
SO European Journal of Pharmacology (**1998**), **355**(1),

57-66
CODEN: EJPHAZ; ISSN: 0014-2999
PB Elsevier Science B.V.
DT Journal
LA English
CC 1-9 (Pharmacology)
AB **Anandamide** (**arachidonylethanolamide**) was tested for bronchodilator and anti-inflammatory activities. Conscious guinea pigs were given cumulative i.v. doses of **anandamide** (1.0, 3.0, and 10.0 mg/kg) to assess its effect on dynamic compliance (Cdyn), total pulmonary resistance (RL), tidal volume (VT) and breathing frequency (f). Other guinea pigs were exposed to an aerosol of A23187 (6S-[6α(2S*,3S*),8β(R*),9β,11α]-5-(methylamino)-2-[[3,9,11-trimethyl-8-[1-methyl-2-oxo-2-(1H-pyrrol-2-yl)ethyl]-1,7-dioxaspiro[5.5]undec-2-yl]methyl]-4-benzoxazolecarboxylic acid) until Cdyn decreased by 50% (.apprx.5 min) and at 20 min, cumulative i.v. doses of **anandamide** (1.0, 3.0, and 10.0 mg/kg) were administered and reversal of Cdyn examined After the final dose of **anandamide**, the animals were killed and excised lung gas vols. (ELGV), i.e., pulmonary gas trapping, measured. Other animals were treated i.v. with **anandamide** (10.0 mg/kg), exposed to an aerosol of A23187 until labored breathing began, and then killed 1 h later. **Anandamide** did not significantly affect Cdyn, RL, VT and f. ELGV values of **anandamide**-treated guinea pigs were not different from those of vehicle-treated animals. **Anandamide** failed to reverse A23187-induced decreases in Cdyn and to reduce A23187-associated ELGV increases. Also, it did not prevent the prolonged airway obstruction caused by A23187. Histol. evaluation revealed that **anandamide** significantly reduced A23187-related airway epithelial injury and pulmonary leukocytosis. However, it did not prevent A23187-induced peribronchiolar granulocytic accumulation. Our results suggest that in vivo **anandamide** has minimal direct airway smooth muscle-related actions, however it may possess modest anti-inflammatory properties.
ST lung injury A23187 **anandamide**
IT Respiratory tract
(epithelium, A23187-induced injury; pulmonary actions of **anandamide** in guinea pigs with A23187-induced injury)
IT Anti-inflammatory agents
Lung
(pulmonary actions of **anandamide** in guinea pigs with A23187-induced injury)
IT **94421-68-8**, **Anandamide**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(pulmonary actions of **anandamide** in guinea pigs with A23187-induced injury)
RE.CNT 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Ackerman, N; Toxicol Appl Pharmacol 1977, V41, P321 HCAPLUS
(2) Amdur, M; J Appl Physiol 1958, V192, P364 MEDLINE
(3) Audette, C; Life Sci 1990, V47, P753 HCAPLUS
(4) Burstein, S; J Med Chem 1992, V35, P3135 HCAPLUS
(5) Childers, S; Biochem Pharmacol 1994, V47, P711 HCAPLUS
(6) Crawley, J; Pharmacol Biochem Behav 1993, V46, P967 HCAPLUS
(7) Deutsch, D; Biochem Pharmacol 1993, V46, P791 HCAPLUS
(8) Devane, W; Science 1992, V258, P1946 HCAPLUS
(9) Dewey, W; Pharmacol Rev 1986, V38, P151 HCAPLUS
(10) Felder, C; Proc Natl Acad Sci 1993, V90, P7656 HCAPLUS
(11) Fride, E; Eur J Pharmacol 1993, V231, P313 HCAPLUS
(12) Ho, P; Pharmacologist 1979, V21, P154
(13) Hollister, L; Pharmacol Rev 1986, V38, P1 HCAPLUS
(14) Kosersky, D; Eur J Pharmacol 1973, V24, P1 HCAPLUS
(15) Kriseman, T; J Pharmacol Exp Ther 1986, V239, P395 HCAPLUS

(16) Lefort, J; Br J Pharmacol 1978, V63, P35 HCAPLUS
(17) Mackie, K; Mol Pharmacol 1993, V44, P498 HCAPLUS
(18) Mercer, T; Am Ind Hyg Assoc 1968, V29, P66 MEDLINE
(19) Mercer, T; J Aerosol Sci 1970, V1, P9
(20) Misawa, M; Jpn J Pharmacol 1989, V51, P446 HCAPLUS
(21) Omeir, R; Life Sci 1995, V56, P1999 HCAPLUS
(22) Patterson, R; J Clin Invest 1979, V67, P67
(23) Salari, H; J Exp Med 1985, V162, P1904 HCAPLUS
(24) Sautebin, L; J Pharmacol Exp Ther 1985, V234, P217 MEDLINE
(25) Silbaugh, S; J Pharmacol Methods 1987, V18, P295 HCAPLUS
(26) Silbaugh, S; J Toxicol Environ Health 1981, V7, P339 HCAPLUS
(27) Smith, P; J Pharmacol Exp Ther 1994, V270, P219 HCAPLUS
(28) Sofia, R; J Pharmacol Exp Ther 1973, V186, P646 HCAPLUS
(29) Stengel, P; Agents Actions 1991, V32, P270 HCAPLUS
(30) Stengel, P; J Pharmacol Exp Ther 1989, V248, P1084 HCAPLUS
(31) Stengel, P; Prostaglandins 1987, V33, P567 HCAPLUS
(32) Stengel, P; Respir Physiol 1986, V63, P129 MEDLINE
(33) Tashkin, D; Am Rev Respir Dis 1975, V112, P377 MEDLINE
(34) Tashkin, D; Am Rev Respir Dis 1977, V115, P57 HCAPLUS
(35) Tashkin, D; N Eng J Med 1973, V289, P336 MEDLINE
(36) Vachon, L; N Eng J Med 1973, V288, P985 HCAPLUS
(37) Vogel, Z; J Neurochem 1993, V61, P352 HCAPLUS
(38) Wiley, J; Eur J Pharmacol 1995, V276, P49 HCAPLUS

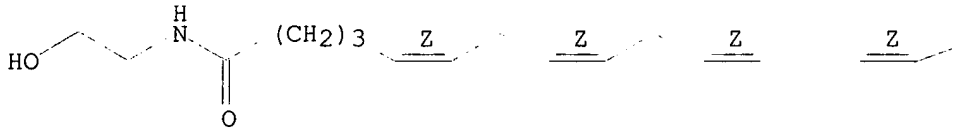
IT **94421-68-8, Anandamide**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(pulmonary actions of **anandamide** in guinea pigs with A23187-induced injury)

RN 94421-68-8 HCAPLUS

CN 5,8,11,14-Eicosatetraenamide, N-(2-hydroxyethyl)-, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

(CH2)4
Me

L86 ANSWER 5 OF 6 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 1998:46055 HCAPLUS

DN 128:136785

ED Entered STN: 28 Jan 1998

TI Regulation of leukotriene and platelet-activating factor synthesis in human alveolar macrophages

AU **Shamsuddin, Mir**; Chen, Ellen; Anderson, James; Smith, Lewis J.

CS Pulmonary Division, Veterans Affairs Lakeside Medical Center, Northwestern University Medical School, Chicago, IL, USA

SO Journal of Laboratory and Clinical Medicine (**1997**), **130** (**6**), **615**-626
CODEN: JLCMAK; ISSN: 0022-2143

PB Mosby-Year Book, Inc.
DT Journal
LA English
CC 2-9 (Mammalian Hormones)
Section cross-reference(s): 15
AB It has been suggested that phospholipase A2 (PLA2) contributes to the regulation of leukotriene (LT) and platelet-activating factor (PAF) synthesis by controlling the release of their precursors, arachidonic acid (AA) and lysophosphatidylcholine (lysoPC), from membrane phospholipids. In rat alveolar macrophages (AMs), PLA2 appears to have a major role in LT synthesis but a more limited role in PAF synthesis. The present study was designed to define the role of PLA2 in LT and PAF synthesis in human AMs and determine whether differences exist between AMs obtained from normal subjects and those from patients with asthma. In the normal subjects, the calcium ionophore A23187 (Cal) increased AM PAF synthesis (percent incorporation of tritiated acetate) by 135% and LTB4 synthesis 88-fold. Phorbol myristate acetate (PMA) had little effect alone, but it had a synergistic effect with Cal, increasing PAF synthesis by 466% and LTB4 synthesis to 229-fold above the control values. Ro 25-4331, a combined cytosolic (c) and secretory (s) PLA2 inhibitor, had little effect on the Cal-stimulated PAF synthesis, but it completely blocked the effect of PMA. It also blocked the Cal- and Cal+PMA-stimulated LTB4 synthesis. AACOCF3, a cPLA2 inhibitor, had no effect on either Cal or Cal+PMA-stimulated PAF synthesis. It reduced LTB4 synthesis, but it did so less effectively than Ro 25-4331. CoA-independent transacylase (CoAl-TA) activity in the AMs increased after stimulation and exposure to Ro 25-4331. SK&F 45905, a CoAl-TA inhibitor, reduced stimulated PAF synthesis by 30% to 40%. Patients with asthma had similar results except that cPLA2 had a greater role in stimulated LTB4 synthesis. These data indicate that PLA2 plays a direct role in human AM LT synthesis; both the cytosolic and secretory forms contribute to LT synthesis; PLA2 appears to have a more limited role in PAF synthesis, although it mediates the synergistic effect of PMA, probably via sPLA2; and CoAl-TA contributes to PAF synthesis during PLA2 inhibition. With the exception of the greater role for cPLA2 in stimulated LTB4 synthesis in the patients with asthma, the contributions of PLA2 and CoAl-TA to AM LT and PAF synthesis appear to be similar in normal subjects and patients with asthma.
ST leukotriene platelet activating factor alveolar macrophage; phospholipase leukotriene PAF alveolar macrophage
IT Macrophage
(alveolar; phospholipase A2 in regulation of leukotriene and platelet-activating factor synthesis in human alveolar macrophages)
IT Lung
(macrophage; phospholipase A2 in regulation of leukotriene and platelet-activating factor synthesis in human alveolar macrophages)
IT Asthma
(phospholipase A2 in regulation of leukotriene and platelet-activating factor synthesis in human alveolar macrophages)
IT Lysophosphatidylcholines
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(phospholipase A2 in regulation of leukotriene and platelet-activating factor synthesis in human alveolar macrophages)
IT Leukotrienes
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(phospholipase A2 in regulation of leukotriene and platelet-activating factor synthesis in human alveolar macrophages)
IT 9001-84-7, Phospholipase A2
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(cytosolic and secretory; phospholipase A2 in regulation of leukotriene

and platelet-activating factor synthesis in human alveolar macrophages)
IT 7440-70-2, Calcium, biological studies 16561-29-8, Phorbol myristate acetate 102347-79-5, CoA-independent transacylase
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(phospholipase A2 in regulation of leukotriene and platelet-activating factor synthesis in human alveolar macrophages)
IT 506-32-1, Arachidonic acid
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(phospholipase A2 in regulation of leukotriene and platelet-activating factor synthesis in human alveolar macrophages)
IT 65154-06-5, Blood platelet-activating factor 71160-24-2, LTB4
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(phospholipase A2 in regulation of leukotriene and platelet-activating factor synthesis in human alveolar macrophages)
RE.CNT 51 THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Albert, D; J Biol Chem 1983, V258, P97 HCAPLUS
(2) Arm, J; Clin Sci 1993, V84, P501 MEDLINE
(3) Arm, J; J Allergy Clin Immunol 1988, V82, P654 MEDLINE
(4) Balsinde, J; J Biol Chem 1996, V271, P6758 HCAPLUS
(5) Balsinde, J; Proc Natl Acad Sci USA 1994, V91, P11060 HCAPLUS
(6) Barr, R; Br J Clin Pharmacol 1993, V35, P637 HCAPLUS
(7) Chai, H; J Allergy Clin Immunol 1975, V56, P323 MEDLINE
(8) Chakraborti, S; Cell Signal 1995, V7, P75 HCAPLUS
(9) Clark, J; Cell 1991, V65, P1043 HCAPLUS
(10) Clark, J; J Lipid Med Cell Signal 1995, V12, P83 HCAPLUS
(11) Cuss, F; Lancet 1986, V2, P189 MEDLINE
(12) Elstad, M; J Biol Chem 1989, V264, P8467 HCAPLUS
(13) Fels, A; Proc Natl Acad Sci USA 1982, V79, P7866 HCAPLUS
(14) Folch, J; J Biol Chem 1957, V226, P497
(15) Fonteh, A; J Immunol 1993, V150, P563 HCAPLUS
(16) Fonteh, A; J Immunol 1994, V152, P5438 HCAPLUS
(17) Fuller, R; Respir Med 1989, V83, P177 MEDLINE
(18) Hazen, S; J Biol Chem 1991, V266, P5629 HCAPLUS
(19) Hsueh, W; Biochem Biophys Res Commun 1982, V106, P1085 HCAPLUS
(20) Humes, J; J Biol Chem 1982, V257, P1591 HCAPLUS
(21) Irvine, R; Biochem J 1982, V204, P3 HCAPLUS
(22) Israel, E; Ann Intern Med 1993, V119, P1059 MEDLINE
(23) Kaye, M; Am Rev Respir Dis 1990, V141, P993 HCAPLUS
(24) Kramer, R; J Biol Chem 1989, V264, P5768 HCAPLUS
(25) Lee, T; Am Rev Respir Dis 1992, V145, PS27 MEDLINE
(26) Lewis, R; N Engl J Med 1990, V323, P645 HCAPLUS
(27) McIntyre, T; J Clin Invest 1985, V76, P271 HCAPLUS
(28) McManus, L; Lab Invest 1993, V69, P639 HCAPLUS
(29) Mehta, D; Am Rev Respir Dis 1990, V142, P157 MEDLINE
(30) Murakami, M; J Biochem 1992, V111, P175 HCAPLUS
(31) Murakami, M; J Lipid Med Cell Signal 1995, V12, P119 HCAPLUS
(32) Naraba, A; J Biochem 1995, V118, P442
(33) Nieto, M; J Biol Chem 1991, V266, P18699 HCAPLUS
(34) Parker, J; J Biol Chem 1987, V262, P5385 HCAPLUS
(35) Riendeau, D; J Biol Chem 1994, V269, P15619 HCAPLUS
(36) Rodorf, G; J Neurosci 1991, V11, P1829
(37) Shamsuddin, M; Am J Respir Cell Mol Biol 1995, V12, P697 HCAPLUS
(38) Shamsuddin, M; J Lab Clin Med 1992, V120, P434 HCAPLUS
(39) Smith, L; Am Rev Respir Dis 1993, V148, P682 MEDLINE
(40) Snyder, F; Am J Physiol 1990, V259, PC697 HCAPLUS
(41) Spector, S; Am J Respir Crit Care Med 1994, V150, P618 MEDLINE
(42) Street, I; Biochemistry 1993, V32, P5935 HCAPLUS
(43) Sturk, A; Adv Lipid Res 1989, V23, P219 HCAPLUS

(44) Suga, K; J Biol Chem 1990, V265, P12363 HCAPLUS
(45) Sugiura, T; Biochem Biophys Res Commun 1985, V127, P384 HCAPLUS
(46) Tramposch, K; J Pharmacol Exp Ther 1994, V271, P852 HCAPLUS
(47) Venable, M; J Biol Chem 1991, V266, P18691 HCAPLUS
(48) Wijkander, J; J Biol Chem 1995, V270, P26543 HCAPLUS
(49) Winkler, J; Biochim Biophys Acta 1991, V1081, P339 HCAPLUS
(50) Winkler, J; J Pharmacol Exp Ther 1995, V274, P1338 HCAPLUS
(51) Withnall, M; Biochem Pharmacol 1995, V50, P1893 HCAPLUS

L86 ANSWER 6 OF 6 HCAPLUS COPYRIGHT 2003 ACS on STN
AN 1983:78162 HCAPLUS
DN 98:78162
ED Entered STN: 12 May 1984
TI Nasal administration of narcotic antagonists and analgesics.
IN Hussain, Anwar Alwan
PA University of Kentucky Research Foundation, USA
SO PCT Int. Appl., 36 pp.
CODEN: PIXXD2
DT Patent
LA English
IC A61K031-40; A61K031-47; A61K031-485
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	WO 8203768	A1	19821111	WO 1982-US546	19820427	
	W: AU, DK, JP, NO					
	RW: AT, BE, CH, DE, FR, GB, LU, NL, SE					
	US 4464378	A	19840807	US 1981-258308	19810428	<--
	AU 8285247	A1	19821124	AU 1982-85247	19820427	
	EP 77393	A1	19830427	EP 1982-901764	19820427	
	R: AT, BE, CH, DE, FR, GB, LI, LU, NL, SE					
	CA 1183778	A1	19850312	CA 1982-401775	19820427	
PRAI	US 1981-258308		19810428			
	WO 1982-US546		19820427			

AB Narcotic antagonists, narcotic analgesics, and related compds. can be administered in nasal dosage forms, e.g., solns., suspensions, gels, and ointments, which provide greatly enhanced bioavailability as compared to oral, i.m., s.c., and i.v. dosage forms. Thus, 1 g naloxone-HCl [357-08-4] was dissolved in 80 mL distilled H2O and the pH was adjusted to 7.4 with dilute NaOH solution H2O was added to 100 mL, and the solution was made isotonic with NaCl solution The solution was sterilized by filtration through a 0.2 μ Millipore filter; the formulation contained 1 mg naloxone-HCl/0.1 mL. The absorption of naloxone [465-65-6] by the nasal route was as effective as that by the i.v. route and the nasal bioavailability was 70-fold the oral bioavailability in rats.

ST narcotic antagonist analgesic nose
IT Nose
(narcotic antagonists and narcotic analgesics absorption by)
IT Narcotic antagonists
(nasal dosage forms of, for enhanced bioavailability)
IT Analgesics
(narcotic, nasal dosage forms of, for enhanced bioavailability)
IT 465-65-6
RL: PROC (Process)
(bioavailability of, from nasal dosage forms)
IT 57-29-4 62-67-9 64-31-3 71-68-1 71-82-9 124-92-5 127-35-5
152-02-3 314-19-2 357-07-3 357-08-4 359-83-1 1041-90-3
1239-04-9 1972-08-3 3572-80-3 13956-29-1 16590-41-3 17146-95-1
20594-83-6 23277-43-2 42408-82-2 52485-79-7 53152-21-9

58786-99-5 66429-56-9 71048-87-8 84666-77-3 84666-78-4
84666-79-5 84666-80-8 84666-81-9 84666-82-0 84697-43-8
RL: BIOL (Biological study)
(nasal dosage forms of, for enhanced bioavailability)

=> => fil wpix
FILE 'WPIX' ENTERED AT 16:05:27 ON 11 DEC 2003
COPYRIGHT (C) 2003 THOMSON DERWENT

FILE LAST UPDATED: 8 DEC 2003 <20031208/UP>
MOST RECENT DERWENT UPDATE: 200379 <200379/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> NEW WEEKLY SDI FREQUENCY AVAILABLE --> see NEWS <<<

>>> SLART (Simultaneous Left and Right Truncation) is now
available in the /ABEX field. An additional search field
/BIX is also provided which comprises both /BI and /ABEX <<<

>>> PATENT IMAGES AVAILABLE FOR PRINT AND DISPLAY <<<

>>> FOR A COPY OF THE DERWENT WORLD PATENTS INDEX STN USER GUIDE,
PLEASE VISIT:
http://www.stn-international.de/training_center/patents/stn_guide.pdf <<<

>>> FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES, SEE
http://thomsonderwent.com/coverage/latestupdates/ <<<

>>> FOR INFORMATION ON ALL DERWENT WORLD PATENTS INDEX USER
GUIDES, PLEASE VISIT:
http://thomsonderwent.com/support/userguides/ <<<

=> d all abeq tech abex tot

L123 ANSWER 1 OF 3 WPIX COPYRIGHT 2003 THOMSON DERWENT on STN
AN **2002-328609** [36] WPIX
CR 2002-049390 [06]
DNC **C2002-094885**
TI Use of **anandamide** and structurally related lipids in the
treatment of disease of symptoms associated with abnormal activity of at
least one vanilloid receptor.
DC B05
IN HOGESTATT, E; ZYGMUNT, P
PA (HOGE-I) HOGESTATT E; (ZYGM-I) ZYGMUNT P
CYC 1
PI US 2002019444 A1 20020214 (200236)* 33p A61K031-55
ADT US 2002019444 A1 CIP of US 2000-567034 20000508, US 2001-849972 20010508
PRAI US 2001-849972 20010508; US 2000-567034 20000508
IC ICM A61K031-55
ICS A61K031-16; A61K031-404; A61K031-47
AB US2002019444 A UPAB: 20030204
NOVELTY - Treatment of a disease or a symptom associated with abnormal
activity of at least one vanilloid receptor involves administration of a
compound (A) that is structurally related to **anandamide**,
AM404, 1-arachidonylglycerol or 2-arachidonylglycerol.
DETAILED DESCRIPTION - Treatment of a disease or a symptom associated
with abnormal activity of at least one vanilloid receptor involves
administration of a compound (A) is of formula A-B-C' (I) or D-E-C' (II).
(A) is structurally related to **anandamide**, **AM404**,
1-arachidonylglycerol or 2-arachidonylglycerol.

A = R1-(CH2)n-(CH)n1(R3)-, R1-CH2-CH(R2)-(CH2)n2-(CH)n1(R3)-, R1-CH2-CH(-CH2-R2)-(CH2)n2-(CH)n1(R3)- or group of formula (i), (ii) or (iii);
n = 0 - 8;
n1 = 0 - 1;
n2 = 0 - 6;
R1 = -OH, -CH2OH, -C2H5OH, 1-3C alkoxy, -CH2OCH3, --C2H5OCH3, -OCH2OH, OC2H4OH, OCH2OCH3, OC2H4OCH3, -SH, -CH2SH, -C2H5SH, -SCH3, -SC2H5, -CH2SCH3, -C2H5SCH3, -NO2, -OCH2NH2, -OC2H5NH2, Cl, F, Br, or I;
R2 = H or R1;
R3 = -H, -CH3, -C2H5 or CF3;
R4 = -(CH2)n3-CH-;
R5 = =C- or =CH(CH2)n4CH-;
n3 = 0 - 4;
n4 = 0 - 3;
B = -NHC'(O)-, -NHC'(S)-, -NHC'(O)NH-, NHS(O)-, -C'(O)O-, -C'(O)S-, -C'(S)O-, -NHS-, -C'(O)NH-, -C'(S)NH-, -NHC'(S)NH-, -S(O)NH-, -OC'(O)-, -SC'(O)-, -OC'(S)- or -SNH-;
C' = unsaturated, straight to branched 6-24C (preferably 12-22C) hydrocarbon chain or at least one double bond);
D = group of formula (iv) or (v);
n5 = 1 - 3;
E = -C(O)-, -C(S)-, -C(O)NH-, -C(S)NH-, -S(O)-, -S-, -O-, -C(O)O-, -C(O)S-, -OC(O)- or -C(S)O-.

provided that R2 is not H when R1 is alkoxy. Any hydroxy group of R1 and R2 is optionally protected by a metabolically deprotectable protecting group to provide -OH in situ.

INDEPENDENT CLAIMS are included for the following:

(1) developing (a) agonists and antagonists of a vanilloid receptor involving obtaining (A) and testing the compound for its ability to modulate the activity of at least one vanilloid receptor. The modulation of activity indicates that the compound is agonist or antagonist of vanilloid receptor;

(2) a composition comprising (A); and

(3) a kit containing (A).

ACTIVITY - Antiinflammatory; analgesic; antiallergic; immunosuppressive; antiasthmatic; antiarthritic; antipsoriatic; antimigrain; antiarteriosclerotic; antiulcer; cerebroprotective; antitumor; antiviral; antibacterial; vulnerary; dermatological; antirheumatic; osteopathic; **antitussive**; antianginal; cerebroprotective.

MECHANISM OF ACTION - Vanilloid receptor modulator and activator.

AM404 induced concentration-dependent relaxation in hepatic arteries of the rat was calculated. The pEC50 and Emax values were 7.4 plus or minus 0.1 and 97 plus or minus 2% respectively.

USE - For treating an individual suffering from or suspected of having a high risk of developing at least one disease or disorder or a symptom of the disease or disorder associated with abnormal activity of at least one vanilloid receptor, e.g. inflammation (e.g. neurogenic inflammation, bronchial asthma, arthritis, inflammatory bowel disease, gout, allergic, vasomotor rhinitis, eczema, urticaria or hives, psoriasis), pain (e.g. nociceptive pain, neurogenic pain, postherpetic neuralgia, pain associated with diabetic neuropath, pain associated with osteoarthritis, pain associated with Gillain-Barres disease, headache (e.g. migraine, Horton's headache), itching), allergy and autoimmune disease (e.g. rheumatoid arthritis, conjunctivitis, rhinitis and inflammatory bowel disease), organ dysfunction (e.g. osteoarthritis, nasopharyngeal adenoids, atherosclerosis, urge in continence or bladder hyper-reactivity, **cough**, gastroduodenal ulcer, mucosal damage in the gastrointestinal tract, emesis, myocardial infarction, unstable angina, septic shock, hemorrhage shock, cardiac shock, cerebral vasospasm after subarachnoid hemorrhage, stroke, benign and malignant tumors), and wounds, infection by bacterium virus (e.g. herpes virus) and parasite (all

claimed) in medical, pharmaceutical and scientific fields.

ADVANTAGE - (A) is an endogenous ligand for vanilloid receptors, modulates the activity of vanilloid receptors on primary sensory nerves and provides a molecular mechanism for the non-cannabinoid-1 (CB1) receptor-mediated vasodilator action of **anandamide**. The method can be performed both in vivo and in vitro.

Dwg.0/7

FS CPI

FA AB; GI; DCN

MC CPI: B04-B01B; B06-D01; B10-B04; B10-D03; B10-E04C; B11-C10A; B14-A01; B14-A02; B14-C01; B14-C02; B14-C03; B14-C06; B14-C09; B14-E05; B14-E08; B14-E10; B14-E10C; B14-F01; B14-F02; B14-F07; B14-F08; B14-G02; B14-G02A; B14-H01; B14-J01; B14-J05D; B14-K01; B14-K01A; **B14-K01B**; B14-L01; B14-L06; B14-N01; B14-N03; B14-N04; B14-N05; B14-N07; B14-N07D; B14-N16; B14-N17; B14-N17B; B14-N17C; B14-S06; B14-S07

TECH UPTX: 20030204

TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred Method: The agonists and antagonists are obtained by chemical synthesis or from biologically produced mixtures. (a) is performed in vitro using cells expressing a recombinant VR1 receptor and is high throughput screening method. Preferred Composition: The composition further comprises a drug. Preferred Kit: The kit further contains compounds, solutions and equipment for administration of (A).

ABEX UPTX: 20030204

WIDER DISCLOSURE - Also disclosed are: (a) dilating or constricting vascular tissue including arteries, veins, and capillaries modulating the activity of the vanilloid receptor involving administering (A) to the individual.

ADMINISTRATION - (A) is administered by contacting skin or a mucous membrane or injection locally, epidurally or spinally (claimed).

EXAMPLE - No relevant example given.

L123 ANSWER 2 OF 3 WPIX COPYRIGHT 2003 THOMSON DERWENT on STN

AN **2002-083060** [11] WPIX

DNN **N2002-061882** DNC **C2002-025197**

TI New method of treating **cough** involves the use of a cannabinoid compound.

DC B05 P34

IN PIOMELLI, D

PA (REGC) UNIV CALIFORNIA; (PIOM-I) PIOMELLI D

CYC 96

PI WO 2001089589 A1 20011129 (200211)* EN 63p A61L009-04
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
AU 2001064930 A 20011203 (200221) A61L009-04
US 2002035150 A1 20020321 (200224) A61K031-22
EP 1294411 A1 20030326 (200323) EN A61L009-04
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR
CN 1438900 A 20030827 (200375) A61L009-04

ADT WO 2001089589 A1 WO 2001-US16880 20010523; AU 2001064930 A AU 2001-64930 20010523; US 2002035150 A1 Provisional US 2000-206591P 20000523, US 2001-864920 20010523; EP 1294411 A1 EP 2001-939408 20010523, WO 2001-US16880 20010523; CN 1438900 A CN 2001-811452 20010523

FDT AU 2001064930 A Based on WO 2001089589; EP 1294411 A1 Based on WO 2001089589

PRAI US 2000-206591P 20000523; US 2001-864920 20010523
IC ICM A61K031-22; A61L009-04
ICS A61K031-13; A61K031-135; A61K031-16; A61K031-23
AB WO 200189589 A UPAB: 20020215
NOVELTY - Amelioration of **cough** involves the local administration of a cannabinoid compound to the upper respiratory airways of a subject.

DETAILED DESCRIPTION - Amelioration of **cough** involves the local administration of a cannabinoid compound of formula R-C(=O)-X-(C)n(R3)(R4)-R2 (I) to the upper respiratory airways of a subject.

X = N-R1 or O;

R = optionally saturated, optionally chiral, optionally cyclic and optionally substituted 11-29C hydrocarbyl group and comprises 1-6 oxygen or sulfur atoms;

R1, R3 and R4 = H, 1-4C alkyl, 2-4C alkenyl, 2-4C alkynyl, 3-6C cycloalkyl or 2-4C hydroxyalkyl group;

R2 = OH or -O-CO-1-4Calkyl;

n = 2 -4.

INDEPENDENT CLAIMS are also included for the following: (1) ameliorating **cough** involving administering an inhibitor of endogenous cannabinoid inactivation of R'-C(=O)-NH-R'2 (II) or R'1-X'-R2 (III)

R' = polyunsaturated and optionally saturated 18-22C hydrocarbyl;

R'2 = optionally substituted 3-6C cycloalkyl or optionally substituted phenyl selected from para-hydroxyphenyl or para-hydroxy-ortho-methyl-phenyl;

R'1 = saturated or polyunsaturated and optionally substituted 6-22C hydrocarbyl;

X' = -C=O or SO2;

R2 = halogen or halogen-substituted methyl group.

ACTIVITY - **Antitussive.**

MECHANISM OF ACTION - Inhibitor of endogenous cannabinoid inactivation; cannabinoid receptor agonist.

USE - For ameliorating **cough** and selectively activating CB1 cannabinoid receptors of the upper respiratory airways of patients in need of such treatment and whose vagal control of airway responsiveness is functional (claimed). The cause of the **cough** can be persisting dry **cough** resulting from airway irritation and/or infection, angiotensin converting enzyme (ACE) inhibitors-induced **cough** and cancer-induced **cough.**

ADVANTAGE - The compound is sensitive to metabolic inactivation by transport or hydrolysis, causing clinically insignificant systemic side effects. The compound inhibits **cough** initiation and/or signaling from the upper airways to the central nervous system, thus resulting in the peripheral inhibition of **cough** signaling and produces, at most, clinically insignificant side effects, produces anti-**tussive** effects devoid of bronchial constriction. The composition containing the compound short-circuits the intracellular signaling cascade initiating **cough** by activating CB1 cannabinoid receptors found in the upper airways of mammals, thus regulating **cough** signaling at the pheriphery by the activation of local CB1 cannabinoid receptors. Thus the composition achieves the superior desired anti-**tussive** effects without the dysphoric side effects and habit-forming properties characteristic of centrally acting cannabimimetic or opiate drugs.

Dwg.0/7
FS CPI GMPI
FA AB; DCN
MC CPI: B10-A09C; B10-D03; B10-E04D; B10-F02; B10-G02; **B14-K01B;** B14-L01
TECH UPTX: 20020215
TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Compound: The compound of formula (I) is R5-C(=O)-NH-(C)n(R3)(R4)-R2 or R'5-C(=O)-(C)n(R3)(R4)-R2

R5 = T comprising 1-3 oxygen or sulfur atoms;
T = optionally saturated or optionally substituted 15-29C hydrocarbyl;
R'5 = T comprising 1-3 oxygen atoms.

ABEX UPTX: 20020215

SPECIFIC COMPOUNDS - **Arachidonylethanolamine** (anandiamide), (R)-(+)arachidonyl-1'-hydroxy-2'-propylamide, cis-7,10,13,16-docosatetraenoylethanolamide, homo-delta-linoleyethanolamide and N-propyl-**arachidonylethanolamide** are specifically claimed as (I).
4-(Hydroxyphenyl-arachidonylamide is specifically claimed as (II).
Palmitylsulfonylfluoride and **arachidonyltrifluoromethylketone** are specifically claimed as (III).

ADMINISTRATION - The pharmaceutical composition containing (I), (II) or (III) can be administered parenterally, intravenously, topically, orally, by systemically or by local administration such as aerosol or transdermally.

EXAMPLE - No relevant example given.

DEFINITIONS - Preferred Definitions:
R2 = OH;
X = N-H.
R2 and X combine through the carbonyl group to form a heterocyclic ring structure selected from oxazolidinone ring or a morpholine ring.

L123 ANSWER 3 OF 3 WPIX COPYRIGHT 2003 THOMSON DERWENT on STN
AN **2002-049390** [06] WPIX
DNC **C2002-013923**
TI Use of **anandamide** and related lipids as vanilloid receptor modulators, for treating e.g. inflammation, pain, allergy, autoimmune disease, organ dysfunction, infection and wounds.
DC B02 B05
IN HOGESTATT, E; ZYGMUNT, P
PA (FORS-N) FORSKARPATENT I SYD AB
CYC 96
PI WO 2001085158 A2 20011115 (200206)* EN 107p A61K031-16
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
AU 2001069375 A 20011120 (200219) A61K031-16
ADT WO 2001085158 A2 WO 2001-IB1267 20010508; AU 2001069375 A AU 2001-69375 20010508
FDT AU 2001069375 A Based on WO 2001085158
PRAI US 2000-567034 20000508
IC ICM A61K031-16
ICS A61K031-167; A61K031-232
AB WO 200185158 A UPAB: 20020610
NOVELTY - The use of lipids (I) and (II) structurally-related to **anandamide** (**arachidonylethanolamide**), **AM404** or 1- or 2-arachidonylglycerol as vanilloid receptor modulators for treating a disease or disorder or a symptom of a disease or disorder associated with abnormal activity of a vanilloid receptor is new.
DETAILED DESCRIPTION - The use of lipids of formula (I) and (II) which are structurally-related to **anandamide** (**arachidonylethanolamide**), **AM404** (N-(4-hydroxyphenyl)-5,8,11,14 eicosatetraenamide), or 1- or 2-arachidonylglycerol as vanilloid receptor modulators for treating a disease or disorder or a symptom of a disease or disorder associated with abnormal activity of a vanilloid receptor is new.
A = R1-(CH2)m-(CH(R3))n-, R1-CH2-CH(R2)-(CH2)p (CH(R3))n-,

R1-CH2-CH(CH2R2)-(CH2)p-(CH(R3))n-, or a group of formula (i)-(iii);
m = 0-8;
n = 0-1;
p = 0-6;
R1 = OH, CH2OH, -C2H5OH, 1-3C alkoxy, -CH2OCH3, -C2H5OCH3, OCH2OH, -OC2H4OH, -OCH2OCH3, -OC2H4OCH3, -SH, -CH2SH, C2H5SH, -SCH3, -SC2H5, -CH2SCH3, -C2H5SCH3, NO2, OCH2NH2, -OC2H5NH2, Cl, F, Br or I; where any hydroxy group is optionally protected;
R2 = H or as defined for R1; provided that R2 is not H when R1 is alkoxy;
R3 = H, Me, Et or CF3;
R4 = (CH2)qCH;
q = 0-4;
R5 = =C or =CH(CH2)sCH;
s = 03;
B = -NHC(O)-, -NHC(S)-, -NHC(O)NH-, -NHS(O)-, -C(O)O-, -C(O)S, C(S)O-, -NHS-, -C(O)NH-, -C(S)NH-, -NHC(S)NH-, -S(O)NH-, OC(O)-, -SC(O)-, -OC(S)- or -SNH-;
C = optionally unsaturated 624C hydrocarbon chain;
D = a group of formula (iv) or (v); and
t = 1 3.

INDEPENDENT CLAIMS are included for the following:

(a) a method of achieving analgesia by administering (I) or (II);

(b) a method of developing agonists and antagonists of a vanilloid receptor by obtaining a compound of formula (I) or (II) and testing for its ability to modulate the activity of at least 1 vanilloid receptor, where modulation of activity indicates that the tested compound is an agonist or antagonist of a vanilloid receptor;

(c) a composition comprising (I) or (II), and optionally a drug; and

(d) a kit comprising (I) or (II).

ACTIVITY - Antiinflammatory; antigout; antiallergic; dermatological; antipsoriatic; analgesic; antimigraine; antipruritic; antirheumatic; antiarthritic; osteopathic; antiarteriosclerotic; uropathic; **antitussive**; antiulcer; cardiant; antianginal; antibacterial; immunosuppressive; cerebroprotective; hemostatic; cytostatic; antibacterial; virucide; antiparasitic; vasodilator; antiasthmatic; ophthamological; vulnerary; vasotropic.

AM404 induced concentration dependent relaxation in hepatic arteries of the rat. The pEC50 and Emax values were 7.4 plus or minus 0.1 and 97 plus or minus 2% respectively. Pre-treatment of preparations with capsaicin (10 mu M) abolished **AM404**-induced relaxations.

MECHANISM OF ACTION - (I) and (II) are vanilloid receptor modulators.

USE - For treating disorders, diseases and symptoms including inflammation, e.g. neurogenic inflammation, bronchial asthma, arthritis, inflammatory bowel disease, gout, allergic and vasomotor rhinitis, eczema, urticaria (hives) and psoriasis; pain, e.g. nociceptive pain, neurogenic pain, postherpetic pain, pain associated with diabetic neuropathy or chronic peripheral polyneuropathy, stump pain after amputation, postmastectomy pain syndrome, pain associated with osteoarthritis or Gillain-Barres disease, headache (such as migraine or Horton's headache) and itching; allergy or autoimmune disease, e.g. rheumatoid arthritis, conjunctivitis, rhinitis and inflammatory bowel disease; organ dysfunction, e.g. osteoarthritis, nasopharyngeal adenoids, bronchial asthma, atherosclerosis, urge incontinence or bladder hyper-reactivity, **cough**, gastroduodenal ulcer or other mucosal damage in the gastrointestinal tract, emesis, myocardial infarction, unstable angina, septic shock, hemorrhagic shock, cardiac shock, cerebral vasospasm after subarachnoid hemorrhage, stroke, and benign and malignant tumors; infection, including infection by a bacterium, virus (e.g. herpes virus) or parasite; and wounds.

Dwg.0/7

FS CPI
FA AB; GI; DCN

MC CPI: B06-D01; B06-D03; B06-D04; B10-A08; B10-A13A; B10-A13D; B10-B04; B10-D01; B10-D02; B10-D03; B10-E02; B10-E03; B10-E04; B10-G01; B10-G02; B14-A01; B14-A02; B14-A02A3; B14-A03; B14-A04; B14-C01; B14-C02; B14-C03; B14-C09; B14-E05; B14-E08; B14-E10; B14-E10C; B14-F01B; B14-F01D; B14-F02; B14-F07; B14-G02A; B14-G02D; B14-H01; B14-K01; B14-N03; B14-N04; B14-N09; B14-N10; B14-N12; B14-N13; B14-N15; B14-N16; B14-N17; B14-S05; B14-S06

TECH UPTX: 20020128

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Method of Developing Agonists and Antagonists: The agonists and antagonists are obtained by chemical synthesis or from biologically produced mixtures. The method is performed in vitro using cells expressing a recombinant VR1 receptor, and is preferably a high-throughput screening method.

TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred Composition: A composition comprises **anandamide** or a structurally related lipid and optionally an antiinflammatory drug, pain reliever or antibiotic.

TECHNOLOGY FOCUS - BIOLOGY - Preferred Receptor: The vanilloid receptor is vanilloid receptor 1 (VR1).

ABEX UPTX: 20020128

SPECIFIC COMPOUNDS - The use of 4 compounds is specifically disclosed, e.g. **anandamide** (Ia).

ADMINISTRATION - Administration is by local, epidural or spinal injection, or contact with skin or mucous membrane.

EXAMPLE - No preparative examples are included.

=> d his

(FILE 'HOME' ENTERED AT 14:27:23 ON 11 DEC 2003)
SET COST OFF

FILE 'HCAPLUS' ENTERED AT 14:27:36 ON 11 DEC 2003

L1 1 S US20020035150/PN OR (WO2001-US16880 OR US2000-206591#)/AP,PRN
E PIOMELLI D/AU
L2 97 S E3,E4
SEL RN
SEL RN L1

FILE 'REGISTRY' ENTERED AT 14:28:55 ON 11 DEC 2003

L3 220 S E1-E220
L4 8 S E221-E228
L5 7 S L4 NOT UNSPECIFIED
L6 212 S L3 NOT L4,L5
L7 102 S L6 AND (N AND O)/ELS
L8 STR
L9 220 S L3,L4,L5
L10 2 S L8 SAM SUB=L9
L11 35 S L8 FUL SUB=L9
L12 17 S L9 AND S/ELS
L13 2 S L12 AND F/ELS
L14 1 S L13 NOT C6/ES
L15 2 S L5 NOT L11,L14
L16 51 S L7 AND NR>=1 NOT L11-L15
L17 46 S L16 NOT P/ELS
L18 10 S L17 AND (C26H43NO3 OR C26H37NO2 OR C26H36CLNO OR C37H39NO OR
L19 48 S L11,L14,L15,L18
L20 16 S L3 AND (F OR CL OR BR OR I)/ELS NOT L19
L21 2 S L3 AND NC2OC2/ES
L22 1 S L21 AND 1/NR

```
L23           0 S L3 AND NCOC2/ES
L24           0 S L3 AND NC2OC3/ES
L25          48 S L19,L22
L26         172 S L9 NOT L25
L27           2 S L26 AND (C27H39NO OR C13H27NO2)
L28          50 S L25,L27
                SAV L28 JAGOE864/A
                SEL RN
L29          64 S E229-E278/CRN

     FILE 'HCAPLUS' ENTERED AT 15:17:12 ON 11 DEC 2003
L30          68 S L29
L31         924 S L5
L32         989 S L30,L31
L33          77 S AM374 OR AM404 OR AM356 OR AM()(374 OR 404 OR 356)
L34         116 S METHANANDAMIDE
L35        1109 S ANANDAMIDE OR BM162353 OR BM()(162353 OR 162 353) OR "L734575
L36         114 S ARACHIDONYL TRIFLUOROMETHYL KETONE OR ARACHIDONYL()TRIFLUOROM
L37          24 S ARACHIDONYLETHANOLAMINE OR ARACHIDONYL ETHANOLAMINE
L38          14 S AN20579 OR AN()(20579 OR 20 579) OR HEXADECANESULFONYL FLUORI
L39          32 S ARACHIDONYLTRIFLUOROMETHYL KETONE
L40           6 S REWOPOL SBC 212P
L41         152 S ARACHIDONYLETHANOLAMIDE OR ARACHIDONYL ETHANOLAMIDE
L42           1 S GEROPON SBL 203
L43           2 S N 2 HYDROXYETHYL ARACHIDONYLAMIDE
L44           3 S HYDROXYETHYL ARACHIDONYLAMIDE OR HYDROXYETHYLARACHIDONYLAMIDE
L45           1 S VARSULF SBL 203
L46        1428 S L32-L45
L47           3 S L46 AND ?COUGH?
                E COUGH/CT
                E E3+ALL
L48         789 S E4
                E E5+ALL
L49        2098 S E5,E4
L50        2345 S E4,E5,E6/BI
L51        2922 S ?TUSSIV?
L52           4 S L46 AND L48-L51
L53           5 S L47,L52
                E AIRWAY/CT
                E E3+ALL
L54       17346 S E2
                E E2+ALL
L55      145599 S E4+NT
                E E33+ALL
L56        3601 S E3,E2+NT
                E E12+ALL
L57       44513 S E4,E3+NT
                E E32+ALL
L58        1298 S E5,E5+NT
                E RESPIR/CT
                E E46+ALL
                E E2+ALL
L59       84716 S E4,E3+NT
L60      145599 S E264+NT
L61          44 S L46 AND L54-L60
L62           3 S L53 AND L51
L63           2 S L53 NOT L62
L64           5 S L62,L63
                E RESPIRATORY TRACT/
                E RESPIRATORY TRACT/CT
L65        6411 S E6-E18
                E E6+ALL
L66        2513 S E2
```

```
                E RESPIRATORY TRACT/CT
L67         17346 S E3
L68           699 S E34-E37
L69             7 S L46 AND L65-L68
L70            10 S L64,L69
L71            53 S L1,L2 AND L46
L72             2 S L71 AND L47-L70
L73            10 S L70,L72
L74             7 S L46 AND RESPIRATORY TRACT
L75             0 S L74 NOT L73
L76            10 S L73,L74
                SEL HIT RN

     FILE 'REGISTRY' ENTERED AT 15:37:16 ON 11 DEC 2003
L77             7 S E1-E7

     FILE 'REGISTRY' ENTERED AT 15:37:38 ON 11 DEC 2003

     FILE 'HCAPLUS' ENTERED AT 15:37:45 ON 11 DEC 2003
L78             1 S DE PETROCELLIS ?/AU AND 2000/PY AND (108 AND 1 AND 191)/SO
L79             1 S SHAMSUDDIN ?/AU AND 1997/PY AND (130 AND 6 AND 615)/SO
L80             1 S STENGEL ?/AU AND 1998/PY AND (355 AND 57)/SO
L81             1 S SUGIURA ?/AU AND 2000/PY AND (108 AND 1 AND 89)/SO
L82             1 S ZHU ?/AU AND 1999/PY AND (163 AND 6 AND 3423)/SO
L83             1 S US4464378/PN
L84             6 S L78-L83
L85             4 S L84 AND L46
L86             6 S L84,L85

     FILE 'MEDLINE' ENTERED AT 15:44:03 ON 11 DEC 2003
L87          1245 S L46
                E COUGH/CT
                E E3+ALL
L88          6265 S E8+NT
                E E12+ALL
L89          1429 S E12
L90           190 S E11
                E E68+ALL
L91          1506 S E7
                E RESPIRATORY TRACT/
                E RESPIRATORY TRACT/CT
L92        600503 S E6+NT
                E E3+ALL
L93        250481 S E2+NT
L94            31 S L87 AND L88-L93
L95            14 S L94 AND PY<=2000

     FILE 'EMBASE' ENTERED AT 15:48:34 ON 11 DEC 2003
L96          1356 S L46
L97             6 S L96 AND ?COUGH?
L98             1 S L96 AND ?TUSSIV?
L99             4 S L96 AND RESPIRATORY TRACT
                E RESPIRATORY TRACT/CT
                E E3+A
                E E3+ALL
L100           28 S L96 AND E2+NT
L101           40 S L96 AND E4+NT
L102            9 S L96 AND E15+NT
L103            0 S L96 AND E17+NT
                E COUGH/CT
                E E3+ALL
L104            5 S L96 AND E2+NT
                E E2+ALL
```

```
L105          14 S L97,L98,L102,L104 AND L96-L104
L106           5 S L105 AND PY<=2000

     FILE 'BIOSIS' ENTERED AT 15:52:00 ON 11 DEC 2003
L107        1442 S L46
L108         809 S L107 AND PY<=2000
L109           1 S L108 AND ?COUGH?
L110          40 S L108 AND ?TUSSI?
L111           0 S L108 AND ?TUSSIV?
L112           0 S L110 NOT PERTUSS?

     FILE 'WPIX' ENTERED AT 15:55:08 ON 11 DEC 2003
L113          64 S L33/BIX OR L34/BIX OR L35/BIX OR L36/BIX OR L37/BIX OR L38/BI
                 E ANANDAMIDE/DCN
                 E ARACHIDONYLETHANOLAMINE/DCN
L114           4 S L113 AND ?COUGH?/BIX
L115           4 S L113 AND ?TUSSIV?/BIX
L116           4 S L113 AND (P821 OR P823)/M0,M1,M2,M3,M4,M5,M6
L117           6 S L113 AND P82?/M0,M1,M2,M3,M4,M5,M6 NOT L116
L118         343 S A61P011-14/IC,ICM,ICS,ICA,ICI
L119           0 S L113 AND L118
L120           1 S A61P011/IC,ICM,ICS,ICA,ICI AND L113
L121           3 S (B12-K01 OR C12-K01 OR B14-K01B OR C14-K01B)/MC AND L113
L122          10 S L114-L117,L120,L121
                 SEL DN AN 5 7 8
L123           3 S E1-E7 AND L122

     FILE 'WPIX' ENTERED AT 16:05:27 ON 11 DEC 2003

=>
```

Jan Delaval
Reference Librarian
Biotechnology & Chemical Library
CM1 1E07 – 703-308-4498
jan.delaval@uspto.gov

=> fil hcaplus embase medline biosis
FILE 'HCAPLUS' ENTERED AT 10:24:45 ON 13 FEB 2003
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2003 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'EMBASE' ENTERED AT 10:24:45 ON 13 FEB 2003
COPYRIGHT (C) 2003 Elsevier Science B.V. All rights reserved.

FILE 'MEDLINE' ENTERED AT 10:24:45 ON 13 FEB 2003

FILE 'BIOSIS' ENTERED AT 10:24:45 ON 13 FEB 2003
COPYRIGHT (C) 2003 BIOLOGICAL ABSTRACTS INC.(R)

=> d all hitstr tot l125

L125 ANSWER 1 OF 8 HCAPLUS COPYRIGHT 2003 ACS DUPLICATE 1
AN **2002:899402** HCAPLUS
TI **Anandamide** induces **cough** in conscious guinea-pigs through VR1 receptors
AU Jia, Yanlin; McLeod, Robbie L.; Wang, Xin; Parra, Leonard E.; Egan, Robert W.; Hey, John A.
CS Allergy, Schering-Plough Research Institute, Kenilworth, NJ, 07033, USA
SO British Journal of Pharmacology (2002), 137(6), 831-836
CODEN: BJPCBM; ISSN: 0007-1188
PB Nature Publishing Group
DT Journal
LA English
CC 1 (Pharmacology)
AB 1 Endogenous neuronal lipid mediator **anandamide**, which can be synthesized in the lung, is a ligand of both **cannabinoid** (CB) and vanilloid receptors (VR). The **tussigenic** effect of **anandamide** has not been studied. The current study was designed to test the direct **tussigenic** effect of **anandamide** in conscious guinea-pigs, and its effect on VR1 receptor function in isolated primary guinea-pig nodose ganglia neurons. 2 **Anandamide** (0.3 - 3 mg.cntdot.ml-1), when given by aerosol, induced **cough** in conscious guinea-pigs in a concn. dependent manner. When guinea-pigs were pretreated with capsazepine, a VR1 antagonist, the **anandamide** -induced **cough** was significantly inhibited. Pretreatment with CB1 (SR 141716A) and CB2 (SR 144528) antagonists had no effect on **anandamide**-induced **cough**. These results indicate that **anandamide**-induced **cough** is mediated through the activation of VR1 receptors. 3 **Anandamide** (10 - 100 .mu.M) increased intracellular Ca2+ concn. estd. by Fluo-4 fluorescence change in isolated guinea-pig nodose ganglia cells. The **anandamide** -induced Ca2+ response was inhibited by two different VR1 antagonists: capsazepine (1 .mu.M) and iodoresiniferatoxin (I-RTX, 0.1 .mu.M), indicating that **anandamide**-induced Ca2+ response was through VR1 channel activation. In contrast, the CB1 (SR 141716A, 1 .mu.M) and CB2 (SR 144528, 0.1 .mu.M) receptor antagonists had no effect on Ca2+ response to **anandamide**. 4 In conclusion, these results provide evidence that **anandamide** activates native vanilloid receptors in isolated guinea-pig nodose ganglia cells and induces **cough** through activation of VR1 receptors.
RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Barnes, P; Molec Aspects Med 1990, V11, P351 MEDLINE
(2) Bolser, D; Neurosci Lett 1991, V126, P131 HCAPLUS
(3) Calignano, A; Nature 2000, V408, P96 HCAPLUS
(4) Carr, M; Am J Respir Crit Care Med 2002, V165, P1071
(5) De Petrocellis, L; J Biol Chem 2001, V276, P12856 HCAPLUS
(6) Devane, W; Science 1992, V258, P1946 HCAPLUS

(7) Di Marzo, V; Nature 1994, V237, P686
(8) Doherty, M; Thorax 2000, V55, P643 MEDLINE
(9) Felder, C; Proc Natl Acad Sci USA 1993, V90, P7656 HCAPLUS
(10) Fischer, A; J Clin Invest 1996, V98, P2284 HCAPLUS
(11) Garcia, D; J Neurosci 1998, V18, P2834 HCAPLUS
(12) Hathaway, T; Am Rev Respir Dis 1993, V148, P1233 MEDLINE
(13) Higenbottam, T; J Physiol 1990, V422
(14) Hunt, J; Am J Respir Crit Care Med 2000, V161, P694 MEDLINE
(15) Jia, Y; Br J Pharmacol 2002, V135, P764 HCAPLUS
(16) Jung, J; J Neurosci 1999, V19, P529 HCAPLUS
(17) Lin, Y; J Physiol 2002, V539, P947 HCAPLUS
(18) McLatchie, L; Br J Pharmacol 2001, V132, P899 HCAPLUS
(19) McLeod, R; Br J Pharmacol 2001, V132, P1175 HCAPLUS
(20) Michael, G; J Neurosci 1999, V19, P1844 HCAPLUS
(21) Primkumar, L; Nature 2000, V408, P985
(22) Ralevic, V; Eur J Pharmacol 2001, V424, P211 HCAPLUS
(23) Ross, R; Br J Pharmacol 2001, V132, P631 HCAPLUS
(24) Smart, D; Br J Pharmacol 2000, V129, P227 HCAPLUS
(25) Szallasi, A; Am J Respir Crit Care Med 1995, V152, P59 MEDLINE
(26) Tucker, R; Br J Pharmacol 2001, V132, P1127 HCAPLUS
(27) Vellani, V; J Physiol 2001, V534, P813 HCAPLUS
(28) Wahl, P; Mol Pharmacol 2001, V59, P9 HCAPLUS
(29) Zygmunt, P; Nature 1999, V400, P452 HCAPLUS

L125 ANSWER 2 OF 8 HCAPLUS COPYRIGHT 2003 ACS DUPLICATE 2

AN **2000:802719** HCAPLUS

Bad date

DN **134:95328**

TI Bidirectional control of **airway** responsiveness by endogenous **cannabinoids**

AU Calignano, A.; Katona, I.; Desarnaud, F.; Giuffrida, A.; La Rana, G.; Mackie, K.; Freund, T. F.; **Piomelli, D.**

CS Department of Pharmacology, University of Naples, Naples, 80131, Italy

SO Nature (London) (2000), 408(6808), 96-101
CODEN: NATUAS; ISSN: 0028-0836

PB Nature Publishing Group

DT Journal

LA English

CC 1-9 (**Pharmacology**)
Section cross-reference(s): 13

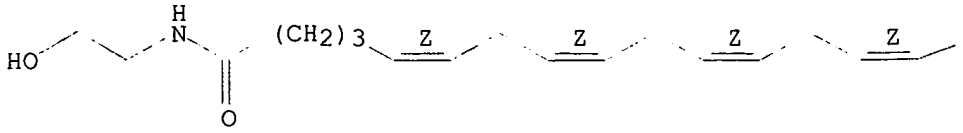
AB Smoking marijuana or administration of its main active constituent, .DELTA.9-**tetrahydrocannabinol** (.DELTA.9-THC), may exert potent dilating effects on human **airways**. But the physiol. significance of this observation and its potential therapeutic value are obscured by the fact that some asthmatic patients respond to these compds. with a paradoxical **bronchospasm**. The mechanisms underlying these contrasting responses remain unresolved. Here we show that the endogenous **cannabinoid anandamide** exerts dual effects on **bronchial** responsiveness in rodents: it strongly inhibits **bronchospasm** and **cough** evoked by the chem. irritant, capsaicin, but causes **bronchospasm** when the constricting tone exerted by the vagus nerve is removed. Both effects are mediated through peripheral CB1 **cannabinoid** receptors found on axon terminals of **airway** nerves. Biochem. analyses indicate that **anandamide** is synthesized in lung tissue on calcium-ion stimulation, suggesting that locally generated **anandamide** participates in the intrinsic control of **airway** responsiveness. In support of this conclusion, the CB1 antagonist SR141716A enhances capsaicin-evoked **bronchospasm** and **cough**. Our results may account for the contrasting **bronchial** actions of **cannabis**-like drugs in humans, and provide a framework for the development of more selective **cannabinoid**-based agents for the treatment of **respiratory** pathologies.

ST **anandamide airway** bidirectional responsiveness

cannabinoid receptor
IT **Cannabinoid receptors**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**CB1**; bidirectional control of **airway** responsiveness by endogenous **cannabinoids**)
IT **Respiratory tract**
(bidirectional control of **airway** responsiveness by endogenous **cannabinoids**)
IT **94421-68-8, Anandamide**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)
(bidirectional control of **airway** responsiveness by endogenous **cannabinoids**)
RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Abboud, R; Chest 1976, V70, P480 HCAPLUS
(2) Barnes, P; Physiol Rev 1992, V72, P699 HCAPLUS
(3) Bolster, D; Eur J Pharmacol 1995, V276, PR1
(4) Cadas, H; J Neurosci 1997, V17, P1226 HCAPLUS
(5) Calignano, A; Nature 1998, V394, P277 HCAPLUS
(6) Coutts, A; Br J Pharmacol 1997, V121, P1557 HCAPLUS
(7) Csiffary, A; Brain Res 1990, V506, P215 HCAPLUS
(8) Desarnaud, F; J Biol Chem 1995, V270, P6030 HCAPLUS
(9) Devane, W; Science 1992, V258, P1946 HCAPLUS
(10) Di Marzo, V; Nature 1994, V372, P686 HCAPLUS
(11) Giuffrida, A; Anal Biochem 2000, V280, P87 HCAPLUS
(12) Ishac, E; Br J Pharmacol 1996, V118, P2023 HCAPLUS
(13) Iversen, L; The Science of Marijuana 2000
(14) Karlsson, J; Pulmonary Pharmacol Ther 1999, V12, P215 HCAPLUS
(15) Katona, I; J Neurosci 1999, V19, P4544 HCAPLUS
(16) Landsman, R; Eur J Pharmacol 1997, V334, PR1 HCAPLUS
(17) Piomelli, D; Trends Pharmacol Sci 2000, V21, P218 HCAPLUS
(18) Rice, W; Eur J Pharmacol 1997, V327, P227 HCAPLUS
(19) Richardson, J; Pain 1998, V75, P111 HCAPLUS
(20) Rinaldi-Carmona, M; FEBS Lett 1994, V350, P240 HCAPLUS
(21) Rinaldi-Carmona, M; J Pharmacol Exp Ther 1998, V284, P644 HCAPLUS
(22) Samhoun, M; Prostaglandins 1984, V27, P711 HCAPLUS
(23) Sugiura, T; Eur J Biochem 1996, V240, P53 HCAPLUS
(24) Szallasi, A; Pharmacol Rev 1999, V51, P159 HCAPLUS
(25) Tashkin, D; Am Rev Respir Dis 1975, V112, P377 MEDLINE
(26) Tashkin, D; Am Rev Respir Dis 1977, V115, P57 HCAPLUS
(27) Vachon, L; New Engl J Med 1973, V288, P985 HCAPLUS
(28) Van Hoozen, B; Clin Rev Allergy Immunol 1997, V15, P243 MEDLINE
(29) Widdicombe, J; Respir Physiol 1998, V114, P5 MEDLINE
(30) Zygmunt, P; Trends Pharmacol Sci 2000, V21, P43 HCAPLUS
IT **94421-68-8, Anandamide**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)
(bidirectional control of **airway** responsiveness by endogenous **cannabinoids**)
RN 94421-68-8 HCAPLUS
CN 5,8,11,14-Eicosatetraenamide, N-(2-hydroxyethyl)-, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

L125 ANSWER 3 OF 8 HCAPLUS COPYRIGHT 2003 ACS DUPLICATE 3
AN **1998:511815** HCAPLUS
DN **129:285829**
TI Pulmonary actions of **anandamide**, an endogenous **cannabinoid** receptor agonist, in guinea pigs
AU Stengel, Peter W.; Rippy, Marian K.; Cockerham, Sandra L.; Devane, William A.; Silbaugh, Steven A.
CS Neuroscience Research, Lilly Research Laboratories, Eli Lilly, Lilly Corporate Center, Indianapolis, IN, USA
SO European Journal of Pharmacology (1998), 355(1), 57-66
CODEN: EJPHAZ; ISSN: 0014-2999
PB Elsevier Science B.V.
DT Journal
LA English
CC 1-9 (Pharmacology)
AB **Anandamide** (**arachidonylethanolamide**) was tested for **bronchodilator** and anti-inflammatory activities. Conscious guinea pigs were given cumulative i.v. doses of **anandamide** (1.0, 3.0, and 10.0 mg/kg) to assess its effect on dynamic compliance (Cdyn), total pulmonary resistance (RL), tidal vol. (VT) and breathing frequency (f). Other guinea pigs were exposed to an aerosol of A23187 (6S-[6.alpha.(2S*,3S*),8.beta.(R*),9.beta.,11.alpha.]-5-(methylamino)-2-[[3,9,11-trimethyl-8-[1-methyl-2-oxo-2-(1H-pyrrol-2-yl)ethyl]-1,7-dioxaspiro[5.5]undec-2-yl]methyl]-4-benzoxazolecarboxylic acid) until Cdyn decreased by 50% (.apprx.5 min) and at 20 min, cumulative i.v. doses of **anandamide** (1.0, 3.0, and 10.0 mg/kg) were administered and reversal of Cdyn examd. After the final dose of **anandamide**, the animals were killed and excised lung gas vols. (ELGV), i.e., pulmonary gas trapping, measured. Other animals were treated i.v. with **anandamide** (10.0 mg/kg), exposed to an aerosol of A23187 until labored breathing began, and then killed 1 h later. **Anandamide** did not significantly affect Cdyn, RL, VT and f. ELGV values of **anandamide**-treated guinea pigs were not different from those of vehicle-treated animals. **Anandamide** failed to reverse A23187-induced decreases in Cdyn and to reduce A23187-assocd. ELGV increases. Also, it did not prevent the prolonged **airway** obstruction caused by A23187. Histol. evaluation revealed that **anandamide** significantly reduced A23187-related **airway** epithelial injury and pulmonary leukocytosis. However, it did not prevent A23187-induced **peribronchiolar** granulocytic accumulation. Our results suggest that in vivo **anandamide** has minimal direct **airway** smooth muscle-related actions, however it may possess modest anti-inflammatory properties.
ST lung injury A23187 **anandamide**
IT **Respiratory tract**

(epithelium, A23187-induced injury; pulmonary actions of **anandamide** in guinea pigs with A23187-induced injury)

IT Anti-inflammatory agents
Lung
(pulmonary actions of **anandamide** in guinea pigs with A23187-induced injury)

IT **94421-68-8, Anandamide**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(pulmonary actions of **anandamide** in guinea pigs with A23187-induced injury)

RE.CNT 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Ackerman, N; Toxicol Appl Pharmacol 1977, V41, P321 HCAPLUS
(2) Amdur, M; J Appl Physiol 1958, V192, P364 MEDLINE
(3) Audette, C; Life Sci 1990, V47, P753 HCAPLUS
(4) Burstein, S; J Med Chem 1992, V35, P3135 HCAPLUS
(5) Childers, S; Biochem Pharmacol 1994, V47, P711 HCAPLUS
(6) Crawley, J; Pharmacol Biochem Behav 1993, V46, P967 HCAPLUS
(7) Deutsch, D; Biochem Pharmacol 1993, V46, P791 HCAPLUS
(8) Devane, W; Science 1992, V258, P1946 HCAPLUS
(9) Dewey, W; Pharmacol Rev 1986, V38, P151 HCAPLUS
(10) Felder, C; Proc Natl Acad Sci 1993, V90, P7656 HCAPLUS
(11) Fride, E; Eur J Pharmacol 1993, V231, P313 HCAPLUS
(12) Ho, P; Pharmacologist 1979, V21, P154
(13) Hollister, L; Pharmacol Rev 1986, V38, P1 HCAPLUS
(14) Kosersky, D; Eur J Pharmacol 1973, V24, P1 HCAPLUS
(15) Kriseman, T; J Pharmacol Exp Ther 1986, V239, P395 HCAPLUS
(16) Lefort, J; Br J Pharmacol 1978, V63, P35 HCAPLUS
(17) Mackie, K; Mol Pharmacol 1993, V44, P498 HCAPLUS
(18) Mercer, T; Am Ind Hyg Assoc 1968, V29, P66 MEDLINE
(19) Mercer, T; J Aerosol Sci 1970, V1, P9
(20) Misawa, M; Jpn J Pharmacol 1989, V51, P446 HCAPLUS
(21) Omeir, R; Life Sci 1995, V56, P1999 HCAPLUS
(22) Patterson, R; J Clin Invest 1979, V67, P67
(23) Salari, H; J Exp Med 1985, V162, P1904 HCAPLUS
(24) Sautebin, L; J Pharmacol Exp Ther 1985, V234, P217 MEDLINE
(25) Silbaugh, S; J Pharmacol Methods 1987, V18, P295 HCAPLUS
(26) Silbaugh, S; J Toxicol Environ Health 1981, V7, P339 HCAPLUS
(27) Smith, P; J Pharmacol Exp Ther 1994, V270, P219 HCAPLUS
(28) Sofia, R; J Pharmacol Exp Ther 1973, V186, P646 HCAPLUS
(29) Stengel, P; Agents Actions 1991, V32, P270 HCAPLUS
(30) Stengel, P; J Pharmacol Exp Ther 1989, V248, P1084 HCAPLUS
(31) Stengel, P; Prostaglandins 1987, V33, P567 HCAPLUS
(32) Stengel, P; Respir Physiol 1986, V63, P129 MEDLINE
(33) Tashkin, D; Am Rev Respir Dis 1975, V112, P377 MEDLINE
(34) Tashkin, D; Am Rev Respir Dis 1977, V115, P57 HCAPLUS
(35) Tashkin, D; N Eng J Med 1973, V289, P336 MEDLINE
(36) Vachon, L; N Eng J Med 1973, V288, P985 HCAPLUS
(37) Vogel, Z; J Neurochem 1993, V61, P352 HCAPLUS
(38) Wiley, J; Eur J Pharmacol 1995, V276, P49 HCAPLUS

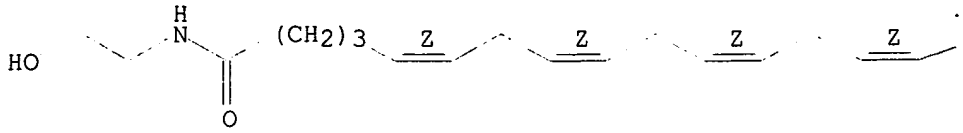
IT **94421-68-8, Anandamide**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(pulmonary actions of **anandamide** in guinea pigs with A23187-induced injury)

RN 94421-68-8 HCAPLUS

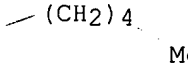
CN 5,8,11,14-Eicosatetraenamide, N-(2-hydroxyethyl)-, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



L125 ANSWER 4 OF 8 HCAPLUS COPYRIGHT 2003 ACS
AN **2001:868275** HCAPLUS
DN **136:648**
TI **Cannabinoid** receptor agonists for treatment of **cough** without psychoactive effects
IN **Piomelli, Daniele**
PA The Regents of the University of California, USA
SO PCT Int. Appl., 63 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61L009-04
ICS A61K031-135; A61K031-13
CC 1-9 (**Pharmacology**)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2001089589	A1	20011129	WO 2001-US16880	20010523 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 2002035150	A1	20020321	US 2001-864920	20010523 <--
PRAI US 2000-206591P	P	20000523		

OS MARPAT 136:648
AB The invention discloses the existence of **cannabinoid** receptors in the **airways**, which are functionally linked to inhibition of **cough**. A method of ameliorating **cough** comprising the local administration to the upper **respiratory airways** of a subject in need of such treatment of **cannabinoid** compds. e.g. RC(O)X[C(R3)(R4)]nR2 where [X=NR1,O; R = (un)satd., (a)chiral, (a)cyclic, (un)substituted, C11-29 hydrocarbyl; R1, R3, R4 = C1-4 alkyl, C2-4 alkenyl, C2-4 alkynyl, C3-6 cycloalkyl, C2-4 hydroxyalkyl; R2=OH, OC(O)(C1-4 alkyl); n=2-4]. Locally acting **cannabinoid** agents can be administered to the **airways** of a subject to ameliorate **cough**, without causing the psychoactive effects characteristic of systemically administered **cannabinoids**. In addn., locally or systemically administered **cannabinoid** inactivation inhibitors can also be used to ameliorate **cough**. The present invention also defines conditions under which **cannabinoid** agents can be

administered to produce **anti-tussive** effects devoid of **bronchial** constriction.

ST **cannabinoid** receptor agonist **antitussive cough** **bronchial** constriction

IT Drug delivery systems
(aerosols; **cannabinoid** receptor agonists for treatment of **cough** without psychoactive effects)

IT **Bronchi**
(**bronchoconstriction**; **cannabinoid** receptor agonists for treatment of **cough** without psychoactive effects)

IT **Antitussives**
(**cannabinoid** receptor agonists for treatment of **cough** without psychoactive effects)

IT Neoplasm
(induced **cough**; **cannabinoid** receptor agonists for treatment of **cough** without psychoactive effects)

IT Drug delivery systems
(injections, i.v.; **cannabinoid** receptor agonists for treatment of **cough** without psychoactive effects)

IT Drug delivery systems
(local; **cannabinoid** receptor agonists for treatment of **cough** without psychoactive effects)

IT Drug delivery systems
(oral; **cannabinoid** receptor agonists for treatment of **cough** without psychoactive effects)

IT **Cannabinoid receptors**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**type CB1**; **cannabinoid** receptor agonists for treatment of **cough** without psychoactive effects)

IT **Respiratory tract**
(upper; **cannabinoid** receptor agonists for treatment of **cough** without psychoactive effects)

IT **86855-26-7**, 1-Hexadecanesulfonyl fluoride **94421-68-8**, **Anandamide 149301-79-1 150314-35-5** **157182-49-5 183718-77-6 187223-90-1**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(**cannabinoid** receptor agonists for treatment of **cough** without psychoactive effects)

IT 9015-82-1, ACE
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(inhibitor-induced **cough**; **cannabinoid** receptor agonists for treatment of **cough** without psychoactive effects)

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD

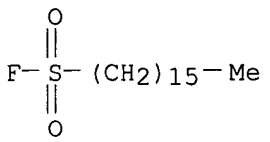
RE

(1) de Petrocellis; Chemistry and Physics of Lipids 2000, V108(1-2), P191 HCAPLUS
(2) Hussain; US 4464378 A 1984 HCAPLUS
(3) Shamsuddin; J Lab And Clin Med 1997, V130(6), P615 HCAPLUS
(4) Stengel; European Journal of Pharmacology 1998, V355, P57 HCAPLUS
(5) Sugiura; Chemistry and Physics of Lipids 2000, V108(1-2), P89 HCAPLUS
(6) Zhu; Journal of Immunology 1999, V163(6), P3423 HCAPLUS

IT **86855-26-7**, 1-Hexadecanesulfonyl fluoride **94421-68-8**, **Anandamide 149301-79-1 150314-35-5** **157182-49-5 183718-77-6 187223-90-1**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(**cannabinoid** receptor agonists for treatment of **cough** without psychoactive effects)

RN 86855-26-7 HCAPLUS

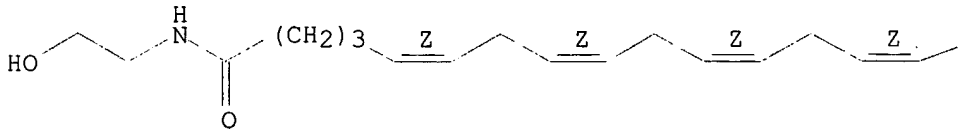
CN 1-Hexadecanesulfonyl fluoride (9CI) (CA INDEX NAME)



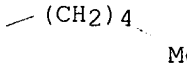
RN 94421-68-8 HCAPLUS
CN 5,8,11,14-Eicosatetraenamide, N-(2-hydroxyethyl)-, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

PAGE 1-A

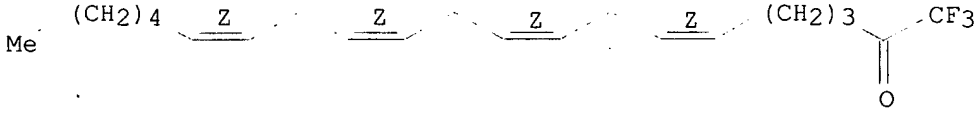


PAGE 1-B



RN 149301-79-1 HCAPLUS
CN 6,9,12,15-Heneicosatetraen-2-one, 1,1,1-trifluoro-, (6Z,9Z,12Z,15Z)- (9CI) (CA INDEX NAME)

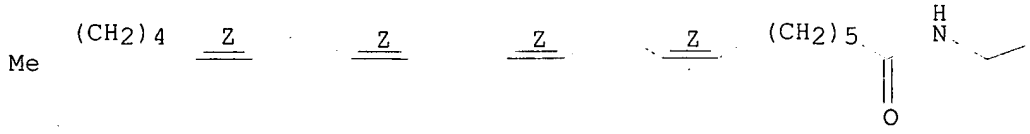
Double bond geometry as shown.



RN 150314-35-5 HCAPLUS
CN 7,10,13,16-Docosatetraenamide, N-(2-hydroxyethyl)-, (7Z,10Z,13Z,16Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

PAGE 1-A

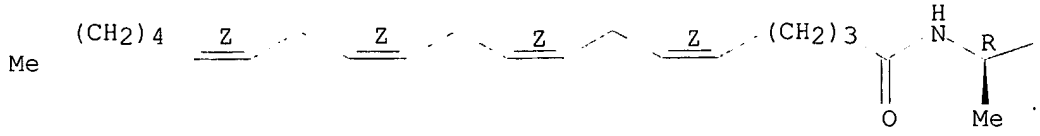


PAGE 1-B

RN 157182-49-5 HCAPLUS
CN 5,8,11,14-Eicosatetraenamide, N-[(1R)-2-hydroxy-1-methylethyl]-, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).
Double bond geometry as shown.

PAGE 1-A

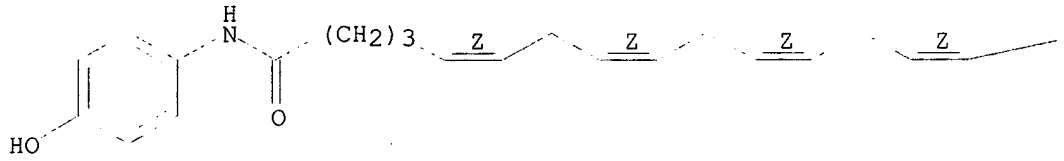


PAGE 1-B

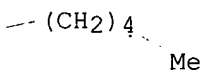
RN 183718-77-6 HCAPLUS
CN 5,8,11,14-Eicosatetraenamide, N-(4-hydroxyphenyl)-, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

PAGE 1-A



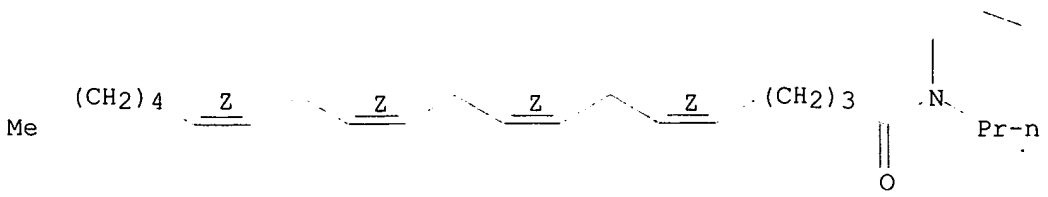
PAGE 1-B



RN 187223-90-1 HCAPLUS
CN 5,8,11,14-Eicosatetraenamide, N-(2-hydroxyethyl)-N-propyl-, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

OH

L125 ANSWER 5 OF 8 HCAPLUS COPYRIGHT 2003 ACS
AN **2001:833079** HCAPLUS
DN **135:352838**
TI **Anandamide** and structurally related lipids as vanilloid receptor modulators
IN Hogestatt, Edward; Zygmunt, Peter
PA Forskarpatent I Syd AB, Swed.
SO PCT Int. Appl., 107 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K031-16
ICS A61K031-167; A61K031-232
CC 1-12 (Pharmacology)
FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2001085158	A2	20011115	WO 2001-IB1267	20010508
WO 2001085158	A3	20020613		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRAI US 2000-567034 A 20000508
OS MARPAT 135:352838
AB The invention discloses that **anandamide** is an endogenous ligand for vanilloid receptors, and esp. the vanilloid receptor VR1. Other structurally related lipids, such as **AM404**, 1-arachidonylglycerol, and 2-arachidonylglycerol, are identified having vanilloid receptor activity as well. Methods of treating individuals suffering from, or at risk of suffering from, diseases and disorders assocd. with abnormal vanilloid receptor function are provided, as are methods of designing and identifying vanilloid receptor agonists and antagonists.
ST **anandamide** lipid analog vanilloid receptor modulator
IT Nervous system
(Guillain-Barre syndrome, treatment of pain assocd. with; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Capsaicin receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(VR1 (vanilloid receptor 1); **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT **Nose**
(allergic rhinitis; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Leg
(amputation, treatment of pain assocd. with; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Allergy inhibitors
Analgesics
Anti-inflammatory agents
Antiarthritics
Antiasthmatics
Antiemetics
Antimigraine agents
Antirheumatic agents
Antitumor agents
Antitussives
Antiulcer agents
Autoimmune disease
Drug delivery systems
Eczema
Gout
Infection
Pain
Psoriasis
Urticaria
Wound healing promoters
(**anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Capsaicin receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Heart, disease
(angina pectoris, unstable; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Antiarteriosclerotics
(antiatherosclerotics; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Infection
(bacterial; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Shock (circulatory collapse)
(cardiogenic; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Brain, disease

(cerebrum, vasospasm, from subarachnoid hemorrhage; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Headache
(cluster, treatment of pain assocd. with; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Eye, disease
(conjunctivitis; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Digestive tract
(disease, mucosal damage; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Organ, animal
(disease; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Shock (circulatory collapse)
(hemorrhagic; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Bladder
(incontinence; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Heart, disease
(infarction; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Human herpesvirus
(infection; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Intestine, disease
(inflammatory; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Mammary gland
Surgery
(mastectomy, treatment of pain assocd. with; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Pharynx
(nasopharynx, adenoids; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Adenoid
(nasopharynx; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Nerve, disease
(neuralgia; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Inflammation
(neurogenic; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

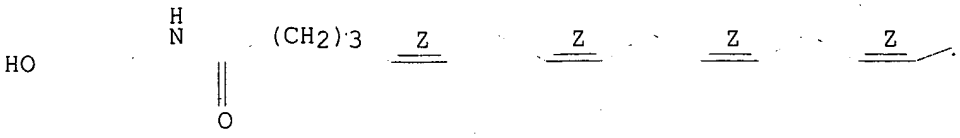
IT Pain
(nociceptive; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)
IT Infection
(parasite; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)
IT Nerve, disease
(peripheral neuropathy, treatment of pain assocd. with; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)
IT Nerve, disease
(polyneuropathy, chronic peripheral, treatment of pain assocd. with; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)
IT **Nose**
(rhinitis, vasomotor; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)
IT **Nose**
(rhinitis; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)
IT Shock (circulatory collapse)
(septic; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)
IT Brain, disease
(stroke; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)
IT Meninges
(subarachnoid hemorrhage, cerebral vasospasm from; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)
IT Headache
Osteoarthritis
Pruritus
(treatment of pain assocd. with; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)
IT Infection
(viral; **anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)
IT 35474-99-8 53847-30-6, 2-Arachidonylglycerol **94421-68-8, Anandamide 183718-77-6, AM 404**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(**anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)
IT **94421-68-8, Anandamide 183718-77-6, AM 404**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)

(**anandamide** and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

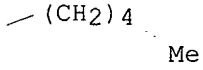
RN 94421-68-8 HCAPLUS
CN 5,8,11,14-Eicosatetraenamide, N-(2-hydroxyethyl)-, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

PAGE 1-A



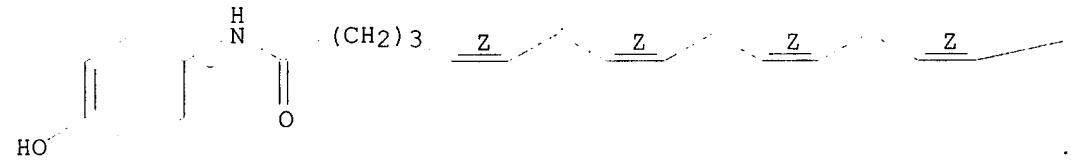
PAGE 1-B



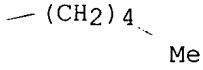
RN 183718-77-6 HCAPLUS
CN 5,8,11,14-Eicosatetraenamide, N-(4-hydroxyphenyl)-, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



L125 ANSWER 6 OF 8 HCAPLUS COPYRIGHT 2003 ACS
AN **2001:216437** HCAPLUS
DN **135:28940**
TI The endogenous **cannabinoid** agonist, **anandamide** stimulates sensory nerves in guinea-pig **airways**
AU Tucker, R. C.; Kagaya, M.; Page, C. P.; Spina, D.
CS The Sackler Institute of Pulmonary Pharmacology, Division of Pharmacology and Therapeutics, GKT School of Biomedical Sciences, King's College London, London, SE1 9RT, UK
SO British Journal of Pharmacology (2001), 132(5), 1127-1135
CODEN: BJPCBM; ISSN: 0007-1188
PB Nature Publishing Group
DT Journal
LA English

CC 1-11 (Pharmacology)
Section cross-reference(s): 2, 13

AB The endogenous **cannabinoid** agonist, **anandamide** produced a modest contractile response in guinea-pig isolated **bronchus** compared with the vanilloid receptor agonist capsaicin. The contractile response to both **anandamide** and capsaicin was inhibited by the vanilloid receptor antagonist, capsazepine. Furthermore, the NK2-selective antagonist, SR48968 but not the NK1-selective antagonist, SR140333 inhibited contractile responses to **anandamide** . The contractile response to **anandamide** was abolished in tissues desensitized by capsaicin. However, **anandamide** failed to cross-desensitize the contractile response to capsaicin. The contractile response to **anandamide** was not significantly altered in the presence of the CB1 receptor antagonist, SR141716A, nor the amidase inhibitor, phenylmethylsulfonyl fluoride (PMSF) but was significantly increased in the presence of the neutral endopeptidase inhibitor, thiorphan. The **cannabinoid** agonist, CP55,940 failed to significantly attenuate the excitatory non-adrenergic non-cholinergic (eNANC) response in guinea-pig **airways**. In contrast, the ORL1 receptor agonist, nociceptin, significantly inhibited this response. The results demonstrate that **anandamide** induces a modest contractile response in guinea-pig isolated **bronchus** that is dependent upon the activation of vanilloid receptors on **airway** sensory nerves. However, **cannabinoid** receptors do not appear to play a role in this regard, nor in regulating the release of neuropeptides from **airway** sensory nerves under physiol. conditions.

ST **anandamide** vanilloid receptor sensory nerve **bronchus** contraction; endopeptidase NK2 tachykinin receptor **anandamide** **bronchus** contraction; ORL1 opioid receptor nonadrenergic noncholinergic neuromuscular transmission **bronchus** contraction

IT Tachykinin receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(NK2; endogenous **cannabinoid** agonist **anandamide** in stimulation of contractile response in guinea-pig isolated **bronchus** dependent on activation of vanilloid receptors on **airway** sensory nerves in relation to)

IT Opioid receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(ORL1; endogenous **cannabinoid** agonist **anandamide** in stimulation of contractile response in guinea-pig isolated **bronchus** dependent on activation of vanilloid receptors on **airway** sensory nerves in relation to)

IT **Bronchi**
Muscle contraction
(endogenous **cannabinoid** agonist **anandamide** in stimulation of contractile response in guinea-pig isolated **bronchus** dependent on activation of vanilloid receptors on **airway** sensory nerves)

IT Capsaicin receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(endogenous **cannabinoid** agonist **anandamide** in stimulation of contractile response in guinea-pig isolated **bronchus** dependent on activation of vanilloid receptors on **airway** sensory nerves)

IT Neuromuscular transmission
(nonadrenergic-noncholinergic; endogenous **cannabinoid** agonist **anandamide** in stimulation of contractile response in guinea-pig isolated **bronchus** dependent on activation of vanilloid receptors on **airway** sensory nerves in relation to)

IT Nerve

(sensory; endogenous **cannabinoid** agonist **anandamide** in stimulation of contractile response in guinea-pig isolated **bronchus** dependent on activation of vanilloid receptors on **airway** sensory nerves)

IT **94421-68-8, Anandamide**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(endogenous **cannabinoid** agonist **anandamide** in stimulation of contractile response in guinea-pig isolated **bronchus** dependent on activation of vanilloid receptors on **airway** sensory nerves)

IT 82707-54-8, Neutral endopeptidase
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(endogenous **cannabinoid** agonist **anandamide** in stimulation of contractile response in guinea-pig isolated **bronchus** dependent on activation of vanilloid receptors on **airway** sensory nerves in relation to)

RE.CNT 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

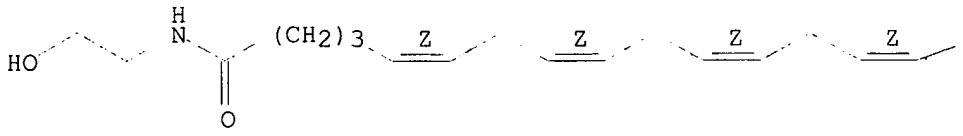
(1) Adcock, J; Airway Hyperresponsiveness: is it really important for asthma 1993, P234
(2) Belvisi, M; Eur J Pharmacol 1992, V215, P314
(3) Black, J; Eur J Pharmacol 1980, V65, P1 HCAPLUS
(4) Calignano, A; Nature 1998, V394, P277 HCAPLUS
(5) Calignano, A; Nature 2000, V408, P96 HCAPLUS
(6) Caterina, M; Nature 1997, V389, P816 HCAPLUS
(7) Devane, W; Science 1992, V258, P1946 HCAPLUS
(8) Dimarzo, V; Biochem J 1996, V316, P977 HCAPLUS
(9) Dray, A; Eur J Pharmacol 1990, V181, P289 HCAPLUS
(10) Ellis, J; J Pharmacol Exp Ther 1994, V268, P85 HCAPLUS
(11) Felder, C; J Pharmacol Exp Ther 1998, V284, P291 HCAPLUS
(12) Hakanson, R; Neurosci 1987, V4, P943
(13) Harrison, S; Br J Pharmacol 1997, V121, P181 HCAPLUS
(14) Hohmann, A; Neurosci 1999, V90, P923 HCAPLUS
(15) Hwang, S; Proc Natl Acad Sci 2000, V97, P6155 HCAPLUS
(16) Izzo, A; Br J Pharmacol 1998, V124, P1363 HCAPLUS
(17) Lay, L; Eur J Pharmacol 2000, V391, P151 HCAPLUS
(18) Lynn, A; J Pharmacol Exp Ther 1994, V268, P1612 HCAPLUS
(19) Maggi, C; Naunyn-Schmeideberg's Arch Pharmacol 1990, V341, P74 HCAPLUS
(20) Manzini, S; Br J Pharmacol 1989, V98, P1077 HCAPLUS
(21) Manzini, S; Br J Pharmacol 1991, V103, P1027 HCAPLUS
(22) Mapp, C; Br J Pharmacol 1991, V104, P49 HCAPLUS
(23) Meini, S; Am Rev Respir Dis 1992, V146, P930 HCAPLUS
(24) Pertwee, R; Br J Pharmacol 1996, V118, P2199 HCAPLUS
(25) Pertwee, R; Eur J Pharmacol 1995, V272, P73 HCAPLUS
(26) Riccio, M; Br J Pharmacol 1997, V122, P249 HCAPLUS
(27) Riccio, M; Eur J Pharmacol 1993, V232, P89 HCAPLUS
(28) Richardson, J; Eur J Pharmacol 1998, V345, P145 HCAPLUS
(29) Richardson, J; Pain 1998, V75, P111 HCAPLUS
(30) Shah, S; Br J Pharmacol 1998, V125, P510 HCAPLUS
(31) Smart, D; Br J Pharmacol 2000, V129, P227 HCAPLUS
(32) Spicuzza, L; Br J Pharmacol 2000, V130, P1720 HCAPLUS
(33) Spina, D; Br J Pharmacol 1991, V103, P1268 HCAPLUS
(34) Spina, D; Br J Pharmacol 1995, V116, P2334 HCAPLUS
(35) Spina, D; Trends Pharmacol Sci 1998, V19, P460 HCAPLUS
(36) Stengel, P; Eur J Pharmacol 1998, V355, P57 HCAPLUS
(37) Stucky, C; Neurosci 1998, V84, P1257 HCAPLUS
(38) Sugiura, T; J Biol Chem 2000, V275, P605 HCAPLUS
(39) Szallasi, A; Pharmacol Rev 1999, V51, P159 HCAPLUS
(40) Tominaga, M; Neuron 1998, V21, P531 HCAPLUS
(41) Vyklicky, L; Journal of Neurophysiology 1998, V79, P670 HCAPLUS

(42) Wagner, J; Hypertension 1999, V33, P429 HCAPLUS.
(43) Walker, J; Proc Natl Acad Sci 1999, V96, P12198 HCAPLUS
(44) Wardle, K; J Pharm Pharmacol 1996, V48, P285 HCAPLUS
(45) White, R; Br J Pharmacol 1998, V125, P689 HCAPLUS
(46) Zygmunt, P; Nature 1999, V400, P452 HCAPLUS

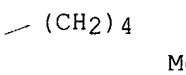
IT **94421-68-8, Anandamide**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(endogenous **cannabinoid** agonist **anandamide** in stimulation of contractile response in guinea-pig isolated **bronchus** dependent on activation of vanilloid receptors on **airway** sensory nerves)
RN 94421-68-8 HCAPLUS
CN 5,8,11,14-Eicosatetraenamide, N-(2-hydroxyethyl)-, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



L125 ANSWER 7 OF 8 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
AN **2002368437** EMBASE
TI Recent advances in the cannabinoids.
AU Adam J.; Cowley P.
CS P. Cowley, Organon Lboratories Ltd., Newhouse, Lanarkshire ML1 5SH, United Kingdom. p.cowley@organon.co.uk
SO Expert Opinion on Therapeutic Patents, (1 Oct 2002) 12/10 (1475-1489).
Refs: 57
ISSN: 1354-3776 CODEN: EOTPEG
CY United Kingdom
DT Journal; General Review
FS 003 Endocrinology
008 Neurology and Neurosurgery
030 Pharmacology
037 Drug Literature Index
038 Adverse Reactions Titles
039 Pharmacy
LA English
SL English
AB This article gives an overview of recent advances in the field of cannabinoid research, with an emphasis on patent literature. The review covers the period from January 2000 to July 2002. The period up to the year 2000 was previously reviewed by Goya and Jagerovic in this journal [1]. In addition to compounds acting directly at the cannabinoid receptor, recent advances in regulation of the endocannabinoid system are also discussed.
CT Medical Descriptors:
drug receptor binding

binding affinity
drug structure
structure activity relation
chemotherapy induced emesis: DT, drug therapy
chemotherapy induced emesis: PC, prevention
chemotherapy induced emesis: SI, side effect
sedation
cognitive defect: SI, side effect
xerostomia: SI, side effect
ataxia: SI, side effect
hypotension: SI, side effect
tachycardia: SI, side effect
drug delivery system
drug inhibition
neuroprotection
antiinflammatory activity
tranquilizing activity
antineoplastic activity
brain injury: DT, drug therapy
obesity: DT, drug therapy
neuropathy: DT, drug therapy
pain: DT, drug therapy
degenerative disease: DT, drug therapy
coughing: DT, drug therapy
immunopathology: DT, drug therapy
human
nonhuman
mouse
rat
clinical trial
controlled study
animal tissue
review
Drug Descriptors:
*cannabinoid derivative: AE, adverse drug reaction
*cannabinoid derivative: CT, clinical trial
*cannabinoid derivative: AN, drug analysis
*cannabinoid derivative: CM, drug comparison
*cannabinoid derivative: DV, drug development
*cannabinoid derivative: DT, drug therapy
*cannabinoid derivative: PK, pharmacokinetics
*cannabinoid derivative: PD, pharmacology
*cannabinoid derivative: IP, intraperitoneal drug administration
*cannabinoid derivative: PO, oral drug administration
*cannabinoid receptor: EC, endogenous compound
cannabinoid 1 receptor: EC, endogenous compound
cannabinoid 2 receptor: EC, endogenous compound
anandamide: AN, drug analysis
anandamide: CM, drug comparison
anandamide: DT, drug therapy
anandamide: PD, pharmacology
2 arachidonoylglycerol: AN, drug analysis
2 arachidonoylglycerol: CM, drug comparison
2 arachidonoylglycerol: DT, drug therapy
2 arachidonoylglycerol: PD, pharmacology
noladin ether: AN, drug analysis
noladin ether: CM, drug comparison
noladin ether: PD, pharmacology
virodhamine: AN, drug analysis
virodhamine: CM, drug comparison
virodhamine: PD, pharmacology
cannabinoid receptor agonist: AE, adverse drug reaction
cannabinoid receptor agonist: AN, drug analysis

cannabinoid receptor agonist: CM, drug comparison
cannabinoid receptor agonist: DV, drug development
cannabinoid receptor agonist: DT, drug therapy
cannabinoid receptor agonist: PR, pharmaceutics
cannabinoid receptor agonist: PD, pharmacology
cannabinoid receptor agonist: PO, oral drug administration
dronabinol: AE, adverse drug reaction
dronabinol: AN, drug analysis
dronabinol: CM, drug comparison
dronabinol: DT, drug therapy
dronabinol: PO, oral drug administration
nabilone: AE, adverse drug reaction
nabilone: AN, drug analysis
nabilone: CM, drug comparison
nabilone: DT, drug therapy
nabilone: PO, oral drug administration
ketone derivative: AE, adverse drug reaction
ketone derivative: AN, drug analysis
ketone derivative: CM, drug comparison
ketone derivative: DT, drug therapy
ketone derivative: PO, oral drug administration
antiinfective agent: AE, adverse drug reaction
cannabidiol: AN, drug analysis
cannabidiol: CM, drug comparison
cannabidiol: PD, pharmacology
cannabidiol derivative: AN, drug analysis
cannabidiol derivative: CM, drug comparison
cannabidiol derivative: PD, pharmacology
4 (1,1 dimethylheptyl) 1',2',3',4',5',6' hexahydro 2,3' dihydroxy 6' (3 hydroxypropyl)biphenyl: AN, drug analysis
4 (1,1 dimethylheptyl) 1',2',3',4',5',6' hexahydro 2,3' dihydroxy 6' (3 hydroxypropyl)biphenyl: CM, drug comparison
4 (1,1 dimethylheptyl) 1',2',3',4',5',6' hexahydro 2,3' dihydroxy 6' (3 hydroxypropyl)biphenyl: PD, pharmacology
2,3 dihydro 5 methyl 3 (morpholinomethyl) 6 (1 naphthoyl)pyrrolo[1,2,3 de][1,4]benzoxazine: AN, drug analysis
2,3 dihydro 5 methyl 3 (morpholinomethyl) 6 (1 naphthoyl)pyrrolo[1,2,3 de][1,4]benzoxazine: CM, drug comparison
2,3 dihydro 5 methyl 3 (morpholinomethyl) 6 (1 naphthoyl)pyrrolo[1,2,3 de][1,4]benzoxazine: PD, pharmacology
5 (4 chlorophenyl) 1 (2,4 dichlorophenyl) 4 methyl n (1 piperidyl) 1h pyrazole 3 carboxamide: CT, clinical trial
5 (4 chlorophenyl) 1 (2,4 dichlorophenyl) 4 methyl n (1 piperidyl) 1h pyrazole 3 carboxamide: AN, drug analysis
5 (4 chlorophenyl) 1 (2,4 dichlorophenyl) 4 methyl n (1 piperidyl) 1h pyrazole 3 carboxamide: CM, drug comparison
5 (4 chlorophenyl) 1 (2,4 dichlorophenyl) 4 methyl n (1 piperidyl) 1h pyrazole 3 carboxamide: DT, drug therapy
5 (4 chlorophenyl) 1 (2,4 dichlorophenyl) 4 methyl n (1 piperidyl) 1h pyrazole 3 carboxamide: PD, pharmacology
5 (4 chlorophenyl) 1 (2,4 dichlorophenyl) 4 methyl n (1 piperidyl) 1h pyrazole 3 carboxamide: IP, intraperitoneal drug administration
5 (4 chlorophenyl) 1 (2,4 dichlorophenyl) 4 methyl n (1 piperidyl) 1h pyrazole 3 carboxamide: PO, oral drug administration
dexanabinol: CT, clinical trial
dexanabinol: AN, drug analysis
dexanabinol: CM, drug comparison
dexanabinol: DT, drug therapy
dexanabinol: PD, pharmacology
hu 308: AN, drug analysis
hu 308: CM, drug comparison
hu 308: PD, pharmacology
am 1703: AN, drug analysis

am 1703: CM, drug comparison
am 1703: PD, pharmacology
tetrahydrocannabinol: AN, drug analysis
tetrahydrocannabinol: CM, drug comparison
tetrahydrocannabinol: PD, pharmacology
ajulemic acid: CT, clinical trial
ajulemic acid: AN, drug analysis
ajulemic acid: CM, drug comparison
ajulemic acid: DT, drug therapy
ajulemic acid: PD, pharmacology
am 694: AN, drug analysis
am 694: CM, drug comparison
am 694: PD, pharmacology
am 2230: AN, drug analysis
am 2230: CM, drug comparison
am 2230: PD, pharmacology
cannabinoid receptor antagonist: AN, drug analysis
cannabinoid receptor antagonist: CM, drug comparison
cannabinoid receptor antagonist: DT, drug therapy
cannabinoid receptor antagonist: PD, pharmacology
cp 55 940: AN, drug analysis
cp 55 940: CM, drug comparison
cp 55 940: DV, drug development
cp 55 940: PD, pharmacology
5 (4 chloro 3 methylphenyl) 1 (4 methylbenzyl) n (1,3,3 trimethylbicyclo[2.2.1]heptan 2 yl) 3 pyrazolecarboxamide: AN, drug analysis
5 (4 chloro 3 methylphenyl) 1 (4 methylbenzyl) n (1,3,3 trimethylbicyclo[2.2.1]heptan 2 yl) 3 pyrazolecarboxamide: CM, drug comparison
5 (4 chloro 3 methylphenyl) 1 (4 methylbenzyl) n (1,3,3 trimethylbicyclo[2.2.1]heptan 2 yl) 3 pyrazolecarboxamide: PD, pharmacology
6 iodo 3 (4 methoxybenzoyl) 2 methyl 1 (2 morpholinoethyl)indole: CM, drug comparison
6 iodo 3 (4 methoxybenzoyl) 2 methyl 1 (2 morpholinoethyl)indole: PD, pharmacology
unindexed drug
unclassified drug

RN (**anandamide**) **94421-68-8**; (dronabinol) 7663-50-5; (nabilone) 51022-71-0; (cannabidiol) 13956-29-1; (4 (1,1 dimethylheptyl) 1',2',3',4',5',6' hexahydro 2,3' dihydroxy 6' (3 hydroxypropyl)biphenyl) 83003-12-7; (2,3 dihydro 5 methyl 3 (morpholinomethyl) 6 (1 naphthoyl)pyrrolo[1,2,3 de][1,4]benzoxazine) 134959-51-6; (5 (4 chlorophenyl) 1 (2,4 dichlorophenyl) 4 methyl n (1 piperidyl) 1h pyrazole 3 carboxamide) 158681-13-1; (dexanabinol) 112924-45-5; (tetrahydrocannabinol) 1972-08-3; (ajulemic acid) 137945-48-3; (5 (4 chloro 3 methylphenyl) 1 (4 methylbenzyl) n (1,3,3 trimethylbicyclo[2.2.1]heptan 2 yl) 3 pyrazolecarboxamide) 192703-06-3; (6 iodo 3 (4 methoxybenzoyl) 2 methyl 1 (2 morpholinoethyl)indole) 164178-33-0

CN (1) Marinol; (2) Cesamet; (3) Cp 55 940; (4) Hu 308; (5) Sr 144528; (6) Sr 141716a; Hu 210; Am 1703; Ct 3; Am 694; Am 2230; Am 630

CO (1) Unimed Pharmaceutical; (2) Cambridge Laboratories; (3) Pfizer; (4) Yissum; (6) Sanofi Synthelabo

L125 ANSWER 8 OF 8 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.

AN **2002241557** EMBASE

TI **Cough**: Potential pharmacological developments.

AU Chung K.F.

CS Dr. K.F. Chung, National Heart and Lung Institute, Imperial College, Royal Brompton/Harefield NHS Trust, Dovehouse Street, London SW3 6LY, United Kingdom. f.chung@ic.ac.uk

SO Expert Opinion on Investigational Drugs, (2002) 11/7 (955-963).
Refs: 79
ISSN: 1354-3784 CODEN: EOIDER
CY United Kingdom
DT Journal; General Review
FS 011 Otorhinolaryngology
015 Chest Diseases, Thoracic Surgery and Tuberculosis
030 Pharmacology
037 Drug Literature Index
038 Adverse Reactions Titles
LA English
SL English

AB **Cough** is an important defensive reflex of the upper airway and is also a very common symptom of respiratory disease. **Cough** following an upper respiratory viral infection is transient, and persistent **cough** is associated with a whole range of conditions, such as asthma, rhino-sinusitis and gastro-oesophageal reflux. Treatment directed at these conditions may improve the associated **cough**. There is often a need, however, to control **cough** itself whatever the cause. The most effective drugs in this class are the opioids, such as morphine, codeine or pholcodeine, but at effective doses they have side effects including drowsiness, nausea, constipation and physical dependence. Investigations into the **cough** reflex and into the potential mechanisms of sensitised **cough** reflex have uncovered several potential targets for novel drugs. New opioids apart from .mu.-agonists such as .kappa.- and .delta.-receptor agonists, have been developed, in addition to non-opioids such as nociceptin. Neurokinin receptor antagonists, bradykinin receptor antagonists, vanniloid receptor VR-1 antagonists may be beneficial by blocking effects of tachykinins and sensory nerve activation. Local anaesthetics, blockers of sodium-dependent channels and maxi-K Ca(2+)-dependent channel activators of afferent nerves are inhibitors of the **cough** reflex. Some of these novel agents may act centrally or peripherally or at both sites as antitussives. Large scale trials of these novel compounds have not been carried out in **cough** in man but there is a serious need for more effective antitussives devoid of side effects.

CT Medical Descriptors:
***coughing: DT, drug therapy**
***coughing: ET, etiology**
symptomatology
respiratory tract disease
upper respiratory tract infection
virus infection
disease association
asthma
rhinosinusitis
gastroesophageal reflux
drug efficacy
dose response
drowsiness: SI, side effect
nausea: SI, side effect
constipation: SI, side effect
drug dependence: SI, side effect
drug targeting
drug mechanism
sensory stimulation
drug antagonism
respiration depression: SI, side effect
diuresis
sedation
human
nonhuman
clinical trial

animal experiment
animal model
controlled study
review
Drug Descriptors:
***antitussive agent: AE, adverse drug reaction**
***antitussive agent: CT, clinical trial**
***antitussive agent: CB, drug combination**
***antitussive agent: DV, drug development**
***antitussive agent: DO, drug dose**
***antitussive agent: IT, drug interaction**
***antitussive agent: DT, drug therapy**
***antitussive agent: PD, pharmacology**
***antitussive agent: IH, inhalational drug administration**
***antitussive agent: IA, intraarterial drug administration**
***antitussive agent: CV, intracerebroventricular drug administration**
***antitussive agent: IV, intravenous drug administration**
***antitussive agent: TP, topical drug administration**
opiate: AE, adverse drug reaction
opiate: DO, drug dose
opiate: DT, drug therapy
pholcodeine: AE, adverse drug reaction
pholcodeine: DO, drug dose
pholcodeine: DT, drug therapy
morphine: AE, adverse drug reaction
morphine: DO, drug dose
morphine: DT, drug therapy
codeine: AE, adverse drug reaction
codeine: CB, drug combination
codeine: DO, drug dose
codeine: IT, drug interaction
codeine: DT, drug therapy
mu opiate receptor agonist: AE, adverse drug reaction
mu opiate receptor agonist: DV, drug development
mu opiate receptor agonist: DT, drug therapy
mu opiate receptor agonist: PD, pharmacology
mu opiate receptor agonist: TP, topical drug administration
kappa opiate receptor agonist: AE, adverse drug reaction
kappa opiate receptor agonist: DV, drug development
kappa opiate receptor agonist: DT, drug therapy
kappa opiate receptor agonist: PD, pharmacology
delta opiate receptor agonist: AE, adverse drug reaction
delta opiate receptor agonist: DV, drug development
delta opiate receptor agonist: DT, drug therapy
delta opiate receptor agonist: PD, pharmacology
anandamide: PD, pharmacology
nociceptin: AE, adverse drug reaction
nociceptin: DV, drug development
nociceptin: DT, drug therapy
nociceptin: EC, endogenous compound
nociceptin: PD, pharmacology
nociceptin: CV, intracerebroventricular drug administration
nociceptin: IV, intravenous drug administration
tachykinin receptor antagonist: DT, drug therapy
tachykinin receptor antagonist: PD, pharmacology
bradykinin antagonist: DT, drug therapy
bradykinin antagonist: PD, pharmacology
tachykinin: EC, endogenous compound
local anesthetic agent: DT, drug therapy
local anesthetic agent: PD, pharmacology
local anesthetic agent: IH, inhalational drug administration
sodium channel blocking agent: CT, clinical trial

sodium channel blocking agent: DT, drug therapy
sodium channel blocking agent: PD, pharmacology
sodium channel blocking agent: IH, inhalational drug administration
sodium channel blocking agent: IA, intraarterial drug administration
potassium channel stimulating agent: DT, drug therapy
potassium channel stimulating agent: PD, pharmacology
furosemide: DT, drug therapy
furosemide: PD, pharmacology
furosemide: IH, inhalational drug administration
diuretic agent: DT, drug therapy
diuretic agent: PD, pharmacology
diuretic agent: IH, inhalational drug administration
phosphodiesterase IV inhibitor: DT, drug therapy
phosphodiesterase IV inhibitor: PD, pharmacology
corticosteroid: DT, drug therapy
corticosteroid: IH, inhalational drug administration
leukotriene receptor blocking agent: DT, drug therapy
17 methylnalorphine: CB, drug combination
17 methylnalorphine: IT, drug interaction
tyrosyl dextro arginylglycyl 4 nitrophenylalanylprolinamide: DT, drug therapy
tyrosyl dextro arginylglycyl 4 nitrophenylalanylprolinamide: PD, pharmacology
tyrosyl dextro arginylglycyl 4 nitrophenylalanylprolinamide: TP, topical drug administration
naltrindole: DT, drug therapy
naltrindole: PD, pharmacology
resiniferatoxin: CM, drug comparison
resiniferatoxin: DV, drug development
resiniferatoxin: DT, drug therapy
resiniferatoxin: PD, pharmacology
delta opiate receptor antagonist: DV, drug development
delta opiate receptor antagonist: DT, drug therapy
delta opiate receptor antagonist: PD, pharmacology
delta opiate receptor antagonist: PO, oral drug administration
levdropropizine: CM, drug comparison
levdropropizine: DT, drug therapy
levdropropizine: PD, pharmacology
dextromethorphan: CM, drug comparison
dextromethorphan: DT, drug therapy
capsazepine: CM, drug comparison
capsazepine: DV, drug development
capsazepine: DT, drug therapy
capsazepine: PD, pharmacology
unindexed drug
unclassified drug

RN (opiate) 53663-61-9, 8002-76-4, 8008-60-4; (morphine) 52-26-6, 57-27-2; (codeine) 76-57-3; (**anandamide**) **94421-68-8**; (nociceptin) 170713-75-4; (furosemide) 54-31-9; (17 methylnalorphine) 4121-75-9; (tyrosyl dextro arginylglycyl 4 nitrophenylalanylprolinamide) 88331-14-0; (naltrindole) 111555-53-4; (resiniferatoxin) 57444-62-9; (levdropropizine) 99291-24-4; (dextromethorphan) 125-69-9, 125-71-3; (capsazepine) 138977-28-3

=> fil reg
FILE 'REGISTRY' ENTERED AT 10:25:10 ON 13 FEB 2003
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2003 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 11 FEB 2003 HIGHEST RN 488780-79-6
DICTIONARY FILE UPDATES: 11 FEB 2003 HIGHEST RN 488780-79-6

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

Please note that search-term pricing does apply when conducting SmartSELECT searches.

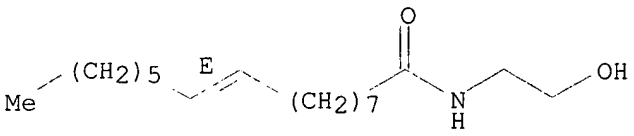
Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

=> d ide can tot l147

L147 ANSWER 1 OF 45 REGISTRY COPYRIGHT 2003 ACS
RN **357292-35-4** REGISTRY
CN 9-Hexadecenamide, N-(2-hydroxyethyl)-, (9E)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF **C18 H35 N O2**
SR CA
LC STN Files: CA, CAPLUS

Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

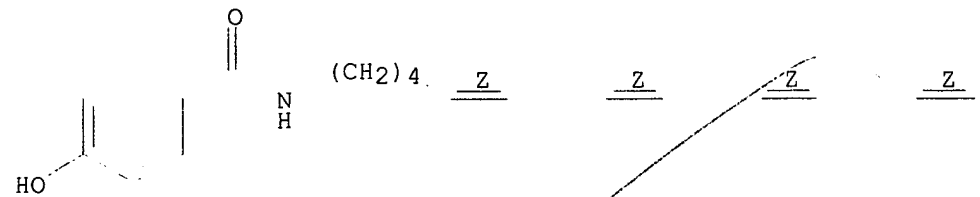
1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 135:190325

L147 ANSWER 2 OF 45 REGISTRY COPYRIGHT 2003 ACS
RN **251908-92-6** REGISTRY
CN Benzamide, N-(5Z,8Z,11Z,14Z)-5,8,11,14-eicosatetraenyl-4-hydroxy- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF **C27 H39 N O2**
SR CA
LC STN Files: CA, CAPLUS, USPATFULL

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

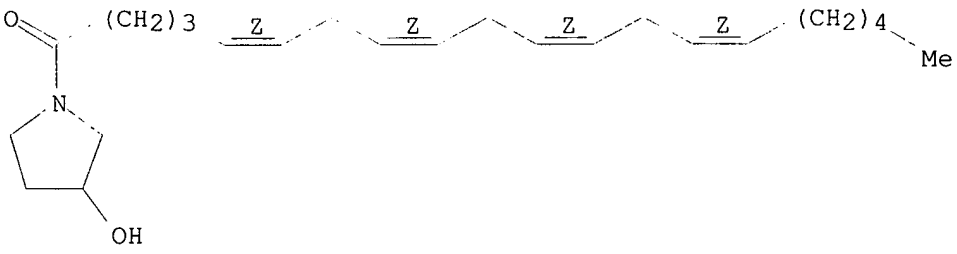
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 132:22820

L147 ANSWER 3 OF 45 REGISTRY COPYRIGHT 2003 ACS
RN **231632-77-2** REGISTRY
CN 3-Pyrrolidinol, 1-[(5Z,8Z,11Z,14Z)-1-oxo-5,8,11,14-eicosatetraenyl]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF **C24 H39 N O2**
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1962 TO DATE)
2 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 134:95508

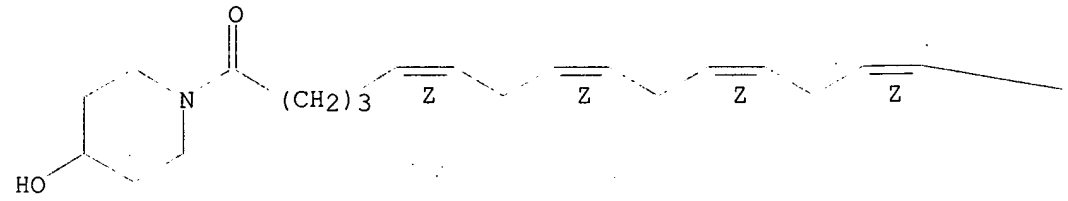
REFERENCE 2: 131:100242

L147 ANSWER 4 OF 45 REGISTRY COPYRIGHT 2003 ACS
RN **231632-76-1** REGISTRY

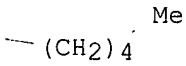
CN 4-Piperidinol, 1-[(5Z,8Z,11Z,14Z)-1-oxo-5,8,11,14-eicosatetraenyl]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF **C25 H41 N O2**
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1962 TO DATE)
2 REFERENCES IN FILE CAPLUS (1962 TO DATE)

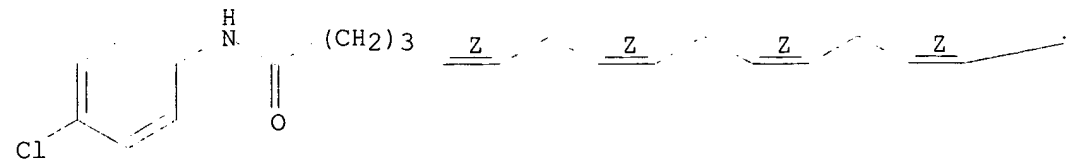
REFERENCE 1: 134:95508

REFERENCE 2: 131:100242

L147 ANSWER 5 OF 45 REGISTRY COPYRIGHT 2003 ACS
RN **231632-75-0** REGISTRY
CN 5,8,11,14-Eicosatetraenamide, N-(4-chlorophenyl)-, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF **C26 H36 Cl N O**
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

-- $(CH_2)_4$
Me

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1962 TO DATE)
2 REFERENCES IN FILE CAPLUS (1962 TO DATE)

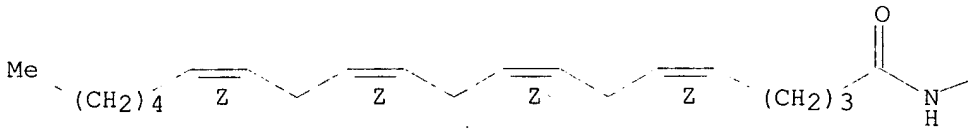
REFERENCE 1: 134:95508

REFERENCE 2: 131:100242

L147 ANSWER 6 OF 45 REGISTRY COPYRIGHT 2003 ACS
RN **231632-74-9** REGISTRY
CN 5,8,11,14-Eicosatetraenamide, N-(4-cyanophenyl)-, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF **C27 H36 N2 O**
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1962 TO DATE)
2 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 134:95508

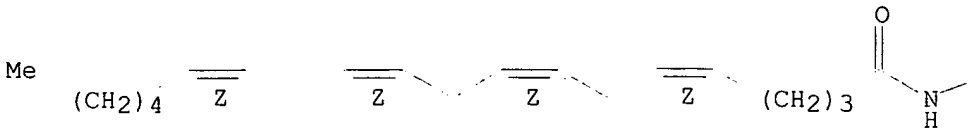
REFERENCE 2: 131:100242

L147 ANSWER 7 OF 45 REGISTRY COPYRIGHT 2003 ACS
RN **231632-73-8** REGISTRY
CN 5,8,11,14-Eicosatetraenamide, N-(4-methylphenyl)-, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF **C27 H39 N O**

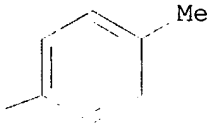
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1962 TO DATE)
2 REFERENCES IN FILE CAPLUS (1962 TO DATE)

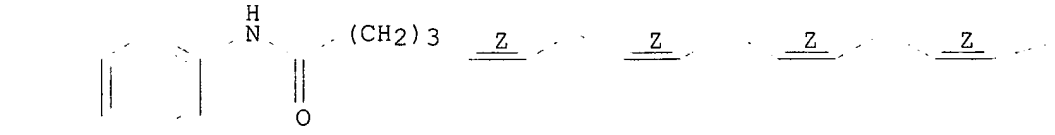
REFERENCE 1: 134:95508

REFERENCE 2: 131:100242

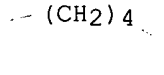
L147 ANSWER 8 OF 45 REGISTRY COPYRIGHT 2003 ACS
RN **231632-72-7** REGISTRY
CN 5,8,11,14-Eicosatetraenamide, N-(4-methoxyphenyl)-, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF **C27 H39 N O2**
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



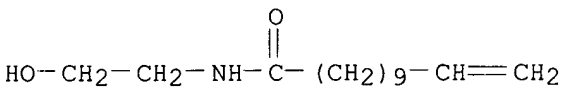
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1962 TO DATE)
2 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 134:95508

REFERENCE 2: 131:100242

L147 ANSWER 9 OF 45 REGISTRY COPYRIGHT 2003 ACS
RN **231632-71-6** REGISTRY
CN 11-Dodecenamide, N-(2-hydroxyethyl)- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF **C14 H27 N O2**
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

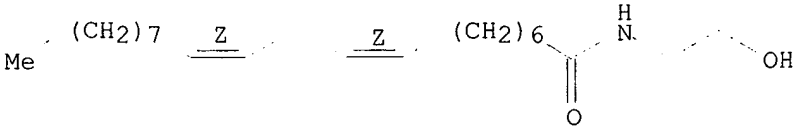
2 REFERENCES IN FILE CA (1962 TO DATE)
2 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 134:95508

REFERENCE 2: 131:100242

L147 ANSWER 10 OF 45 REGISTRY COPYRIGHT 2003 ACS
RN **231632-70-5** REGISTRY
CN 8,11-Eicosadienamide, N-(2-hydroxyethyl)-, (8Z,11Z)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF **C22 H41 N O2**
SR CA
LC STN Files: CA, CAPLUS

Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

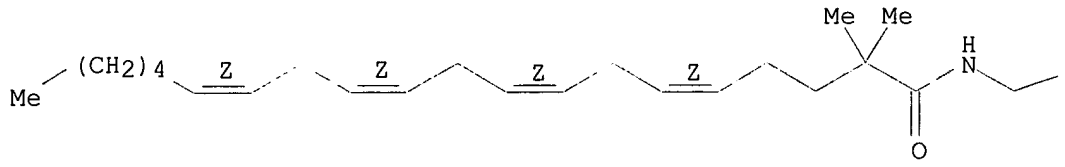
REFERENCE 1: 131:100242

L147 ANSWER 11 OF 45 REGISTRY COPYRIGHT 2003 ACS
RN **187224-18-6** REGISTRY
CN 5,8,11,14-Eicosatetraenamide, N-[(2R)-2-hydroxypropyl]-2,2-dimethyl-, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:

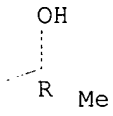
CN 5,8,11,14-Eicosatetraenamide, N-(2-hydroxypropyl)-2,2-dimethyl-, [R-(all-Z)]-
FS STEREOSEARCH
MF **C25 H43 N O2**
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

Absolute stereochemistry. Rotation (-).
Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

5 REFERENCES IN FILE CA (1962 TO DATE)
5 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 135:352627

REFERENCE 2: 134:95508

REFERENCE 3: 131:237502

REFERENCE 4: 131:100242

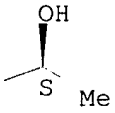
REFERENCE 5: 126:166092

L147 ANSWER 12 OF 45 REGISTRY COPYRIGHT 2003 ACS
RN **187224-16-4** REGISTRY
CN 5,8,11,14-Eicosatetraenamide, N-[(2S)-2-hydroxypropyl]-2,2-dimethyl-, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 5,8,11,14-Eicosatetraenamide, N-(2-hydroxypropyl)-2,2-dimethyl-, [S-(all-Z)]-
FS STEREOSEARCH
MF **C25 H43 N O2**
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

Absolute stereochemistry. Rotation (+).
Double bond geometry as shown.

PAGE 1-A

PAGE 1-B



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

5 REFERENCES IN FILE CA (1962 TO DATE)
5 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 135:352627

REFERENCE 2: 134:95508

REFERENCE 3: 131:237502

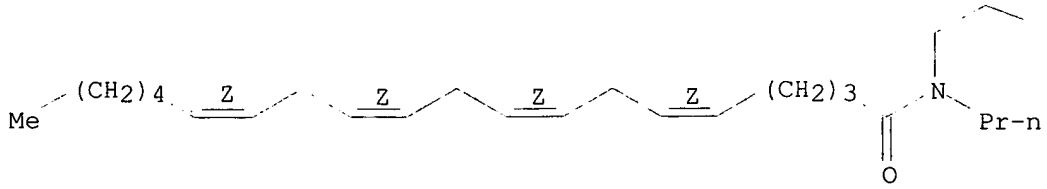
REFERENCE 4: 131:100242

REFERENCE 5: 126:166092

L147 ANSWER 13 OF 45 REGISTRY COPYRIGHT 2003 ACS
RN **187223-90-1** REGISTRY
CN 5,8,11,14-Eicosatetraenamide, N-(2-hydroxyethyl)-N-propyl-, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 5,8,11,14-Eicosatetraenamide, N-(2-hydroxyethyl)-N-propyl-, (all-Z)-
FS STEREOSEARCH
MF **C25 H43 N O2**
SR CA
LC STN Files: CA, CAPLUS, USPATFULL

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1962 TO DATE)
2 REFERENCES IN FILE CAPLUS (1962 TO DATE)

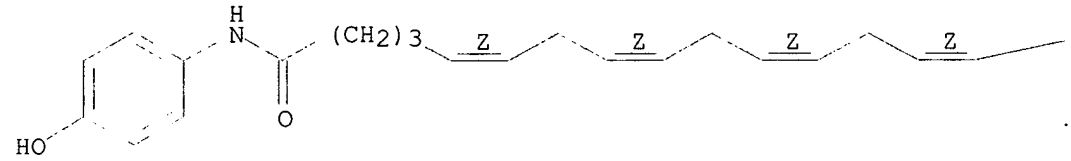
REFERENCE 1: 136:648

REFERENCE 2: 126:166092

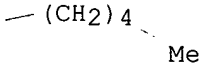
L147 ANSWER 14 OF 45 REGISTRY COPYRIGHT 2003 ACS
RN **183718-77-6** REGISTRY
CN 5,8,11,14-Eicosatetraenamide, N-(4-hydroxyphenyl)-, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 5,8,11,14-Eicosatetraenamide, N-(4-hydroxyphenyl)-, (all-Z)-
OTHER NAMES:
CN AM 404
FS STEREOSEARCH
DR 198022-70-7
MF **C26 H37 N O2**
SR CA
LC STN Files: BIOSIS, BIOTECHNO, CA, CAPLUS, CHEMCATS, CSCHEM, EMBASE, TOXCENTER, USPATFULL

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

30 REFERENCES IN FILE CA (1962 TO DATE)
30 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:103790

REFERENCE 2: 136:395824

REFERENCE 3: 136:304003

REFERENCE 4: 136:183655

REFERENCE 5: 136:161403

REFERENCE 6: 136:648

REFERENCE 7: 135:366583

REFERENCE 8: 135:352838

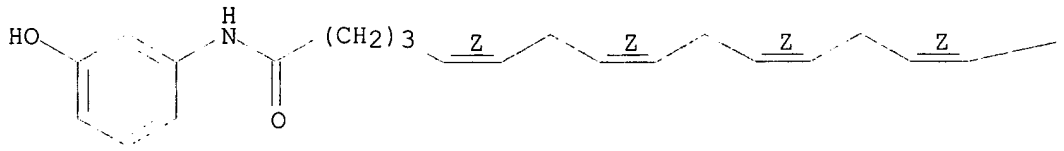
REFERENCE 9: 135:283144

REFERENCE 10: 135:239640

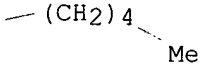
L147 ANSWER 15 OF 45 REGISTRY COPYRIGHT 2003 ACS
RN **183718-75-4** REGISTRY
CN 5,8,11,14-Eicosatetraenamide, N-(3-hydroxyphenyl)-, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 5,8,11,14-Eicosatetraenamide, N-(3-hydroxyphenyl)-, (all-Z)-
FS STEREOSEARCH
MF **C26 H37 N O2**
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

5 REFERENCES IN FILE CA (1962 TO DATE)
5 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 134:95508

REFERENCE 2: 131:100242

REFERENCE 3: 131:41396

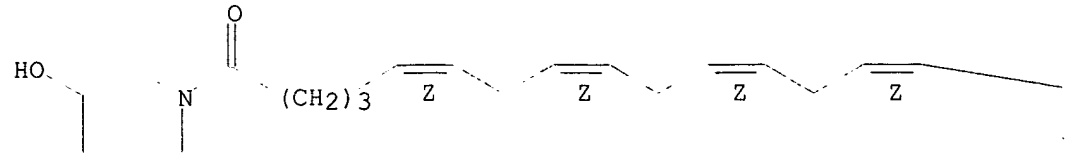
REFERENCE 4: 130:308315

REFERENCE 5: 126:365

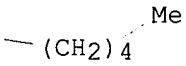
L147 ANSWER 16 OF 45 REGISTRY COPYRIGHT 2003 ACS
RN **183718-67-4** REGISTRY
CN 3-Piperidinol, 1-[(5Z,8Z,11Z,14Z)-1-oxo-5,8,11,14-eicosatetraenyl]- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 3-Piperidinol, 1-(1-oxo-5,8,11,14-eicosatetraenyl)-, (all-Z)-
FS STEREOSEARCH
MF **C25 H41 N O2**
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

3 REFERENCES IN FILE CA (1962 TO DATE)
3 REFERENCES IN FILE CAPLUS (1962 TO DATE)

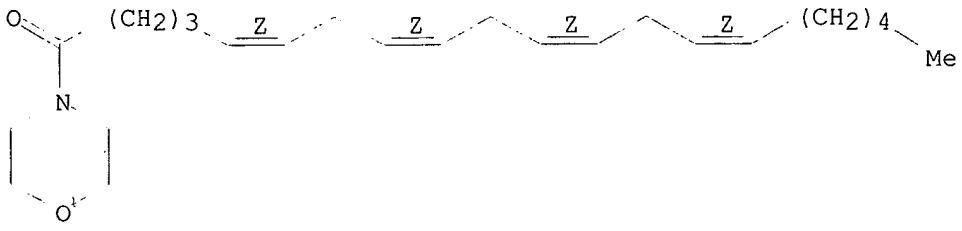
REFERENCE 1: 134:95508

REFERENCE 2: 131:100242

REFERENCE 3: 126:365

L147 ANSWER 17 OF 45 REGISTRY COPYRIGHT 2003 ACS
RN **166100-34-1** REGISTRY
CN Morpholine, 4-[(5Z,8Z,11Z,14Z)-1-oxo-5,8,11,14-eicosatetraenyl]- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Morpholine, 4-(1-oxo-5,8,11,14-eicosatetraenyl)-, (all-Z)-
FS STEREOSEARCH
MF **C24 H39 N O2**
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

9 REFERENCES IN FILE CA (1962 TO DATE)
9 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 134:95508

REFERENCE 2: 133:99074

REFERENCE 3: 131:100242

REFERENCE 4: 129:310388

REFERENCE 5: 125:265009

REFERENCE 6: 125:332

REFERENCE 7: 124:279206

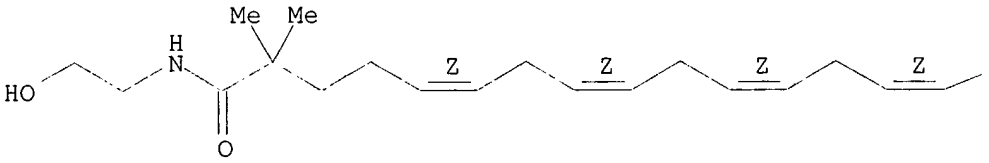
REFERENCE 8: 124:75563

REFERENCE 9: 123:102027

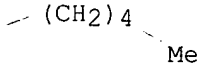
L147 ANSWER 18 OF 45 REGISTRY COPYRIGHT 2003 ACS
RN **164228-51-7** REGISTRY
CN 5,8,11,14-Eicosatetraenamide, N-(2-hydroxyethyl)-2,2-dimethyl-, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 5,8,11,14-Eicosatetraenamide, N-(2-hydroxyethyl)-2,2-dimethyl-, (all-Z)-
FS STEREOSEARCH
MF **C24 H41 N O2**
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

11 REFERENCES IN FILE CA (1962 TO DATE)
11 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 135:352627

REFERENCE 2: 135:137336

REFERENCE 3: 134:95508

REFERENCE 4: 131:237502

REFERENCE 5: 131:100242

REFERENCE 6: 131:41396

REFERENCE 7: 130:308315

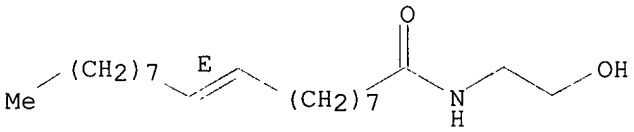
REFERENCE 8: 126:166092

REFERENCE 9: 124:75563

REFERENCE 10: 123:102027

L147 ANSWER 19 OF 45 REGISTRY COPYRIGHT 2003 ACS
RN **162758-96-5** REGISTRY
CN 9-Octadecenamide, N-(2-hydroxyethyl)-, (9E)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 9-Octadecenamide, N-(2-hydroxyethyl)-, (E)-
FS STEREOSEARCH
MF **C20 H39 N O2**
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

5 REFERENCES IN FILE CA (1962 TO DATE)
5 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:289049

REFERENCE 2: 135:78468

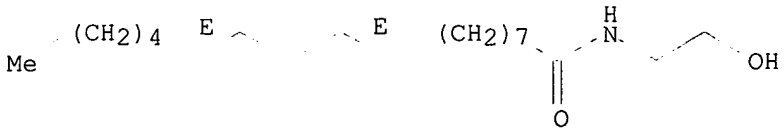
REFERENCE 3: 134:95508

REFERENCE 4: 131:100242

REFERENCE 5: 122:259398

L147 ANSWER 20 OF 45 REGISTRY COPYRIGHT 2003 ACS
RN **162758-95-4** REGISTRY
CN 9,12-Octadecadienamide, N-(2-hydroxyethyl)-, (E,E)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF **C20 H37 N O2**
SR CA
LC STN Files: CA, CAPLUS

Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

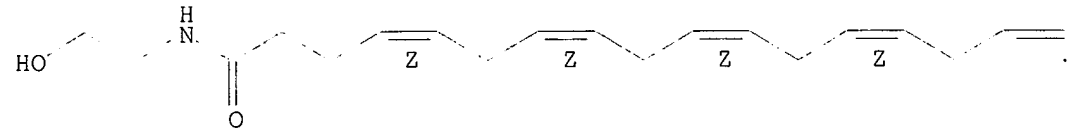
1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 122:259398

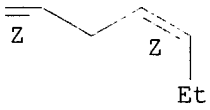
L147 ANSWER 21 OF 45 REGISTRY COPYRIGHT 2003 ACS
RN **162758-94-3** REGISTRY
CN 4,7,10,13,16,19-Docosahexaenamide, N-(2-hydroxyethyl)-, (4Z,7Z,10Z,13Z,16Z,19Z)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 4,7,10,13,16,19-Docosahexaenamide, N-(2-hydroxyethyl)-, (all-Z)-
FS STEREOSEARCH
MF **C24 H37 N O2**
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

8 REFERENCES IN FILE CA (1962 TO DATE)
9 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 136:340738

REFERENCE 2: 135:121637

REFERENCE 3: 133:634

REFERENCE 4: 132:62084

REFERENCE 5: 126:166092

REFERENCE 6: 126:54735

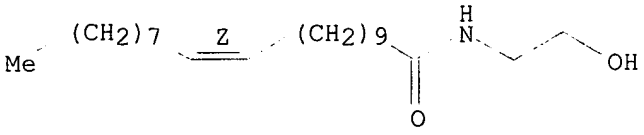
REFERENCE 7: 123:974

REFERENCE 8: 122:259398

L147 ANSWER 22 OF 45 REGISTRY COPYRIGHT 2003 ACS
RN **162758-93-2** REGISTRY

CN 11-Eicosenamide, N-(2-hydroxyethyl)-, (11Z)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 11-Eicosenamide, N-(2-hydroxyethyl)-, (Z)-
OTHER NAMES:
CN N-(2-Hydroxyethyl)-(Z)-11-eicosenamide
CN N-(Z)-11-Eicosenoylethanolamine
FS STEREOSEARCH
MF **C22 H43 N O2**
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

7 REFERENCES IN FILE CA (1962 TO DATE)
7 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 134:95508

REFERENCE 2: 131:100242

REFERENCE 3: 126:166092

REFERENCE 4: 124:75563

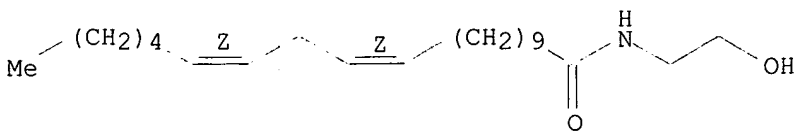
REFERENCE 5: 123:335742

REFERENCE 6: 123:102027

REFERENCE 7: 122:259398

L147 ANSWER 23 OF 45 REGISTRY COPYRIGHT 2003 ACS
RN **162758-92-1** REGISTRY
CN 11,14-Eicosadienamide, N-(2-hydroxyethyl)-, (11Z,14Z)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 11,14-Eicosadienamide, N-(2-hydroxyethyl)-, (Z,Z)-
FS STEREOSEARCH
MF **C22 H41 N O2**
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

5 REFERENCES IN FILE CA (1962 TO DATE)
5 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:226746

REFERENCE 2: 134:95508

REFERENCE 3: 126:166092

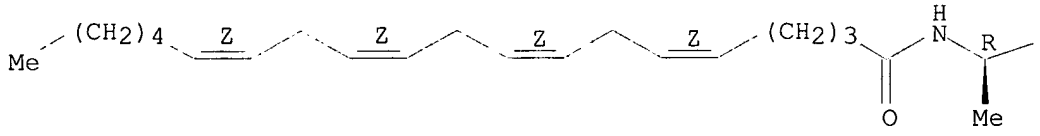
REFERENCE 4: 124:49179

REFERENCE 5: 122:259398

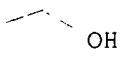
L147 ANSWER 24 OF 45 REGISTRY COPYRIGHT 2003 ACS
RN **157182-49-5** REGISTRY
CN 5,8,11,14-Eicosatetraenamide, N-[(1R)-2-hydroxy-1-methylethyl]-, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 5,8,11,14-Eicosatetraenamide, N-(2-hydroxy-1-methylethyl)-, [R-(all-Z)]-
OTHER NAMES:
CN (R)-Methanandamide
CN AM 356
FS STEREOSEARCH
MF **C23 H39 N O2**
SR CA
LC STN Files: BIOSIS, BIOTECHNO, CA, CAPLUS, CASREACT, CHEMCATS, CSCHEM, EMBASE, TOXCENTER, USPATFULL

Absolute stereochemistry. Rotation (+).
Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

54 REFERENCES IN FILE CA (1962 TO DATE)
55 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:210817

REFERENCE 2: 137:164054

REFERENCE 3: 136:161001

REFERENCE 4: 136:129368

REFERENCE 5: 136:63931

REFERENCE 6: 136:48337

REFERENCE 7: 136:648

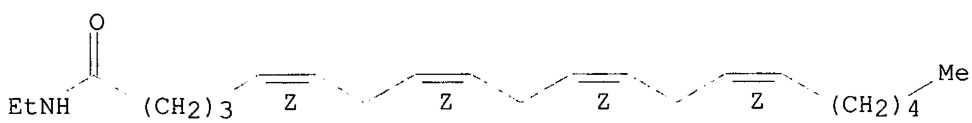
REFERENCE 8: 135:352627

REFERENCE 9: 135:313515

REFERENCE 10: 135:132395

L147 ANSWER 25 OF 45 REGISTRY COPYRIGHT 2003 ACS
RN **156910-28-0** REGISTRY
CN 5,8,11,14-Eicosatetraenamide, N-ethyl-, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 5,8,11,14-Eicosatetraenamide, N-ethyl-, (all-Z)-
FS STEREOSEARCH
MF **C22 H37 N O**
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

7 REFERENCES IN FILE CA (1962 TO DATE)
7 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 134:95508

REFERENCE 2: 133:129510

REFERENCE 3: 131:237502

REFERENCE 4: 131:100242

REFERENCE 5: 131:71878

REFERENCE 6: 126:166092

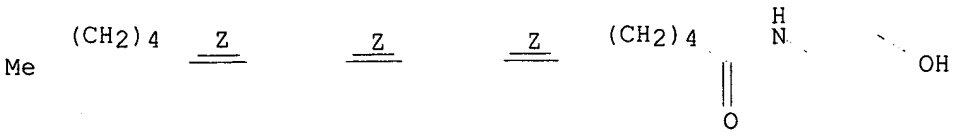
REFERENCE 7: 121:99825

L147 ANSWER 26 OF 45 REGISTRY COPYRIGHT 2003 ACS
RN **150314-37-7** REGISTRY
CN 6,9,12-Octadecatrienamide, N-(2-hydroxyethyl)-, (6Z,9Z,12Z)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 6,9,12-Octadecatrienamide, N-(2-hydroxyethyl)-, (Z,Z,Z)-
OTHER NAMES:
CN N-(2-Hydroxyethyl)-(Z,Z,Z)-6,9,12-octadecatrienam
CN **N-.gamma.-Linolenoylethanolamine**
FS STEREOSEARCH
MF **C20 H35 N O2**
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

Double bond geometry as shown.

homo-delta page 49

I could not find claim 19 "homo-delta-linoleylethanol-amide" - I believe this name to be an error



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

9 REFERENCES IN FILE CA (1962 TO DATE)
9 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 136:340738

REFERENCE 2: 133:70561

REFERENCE 3: 128:200804

REFERENCE 4: 126:166092

REFERENCE 5: 125:297717

REFERENCE 6: 125:138643

REFERENCE 7: 123:335742

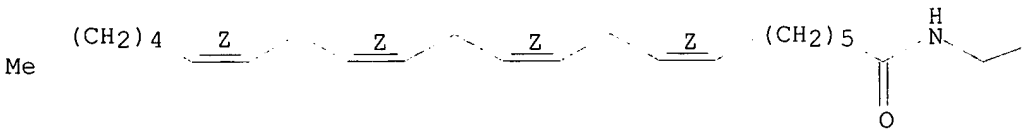
REFERENCE 8: 122:259398

REFERENCE 9: 119:173611

L147 ANSWER 27 OF 45 REGISTRY COPYRIGHT 2003 ACS
RN **150314-35-5** REGISTRY
CN 7,10,13,16-Docosatetraenamide, N-(2-hydroxyethyl)-, (7Z,10Z,13Z,16Z)-
(9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 7,10,13,16-Docosatetraenamide, N-(2-hydroxyethyl)-, (all-Z)-
OTHER NAMES:
CN (all-Z)-N-(7,10,13,16-Docosatetraenoyl)ethanolamine
FS STEREOSEARCH
MF **C24 H41 N O2**
SR CA
LC STN Files: CA, CAPLUS, CHEMCATS, CSCHEM, MEDLINE, TOXCENTER, USPATFULL

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

16 REFERENCES IN FILE CA (1962 TO DATE)
17 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:228362

REFERENCE 2: 137:226746

REFERENCE 3: 136:648

REFERENCE 4: 135:121637

REFERENCE 5: 134:335978

REFERENCE 6: 126:233751

REFERENCE 7: 126:166092

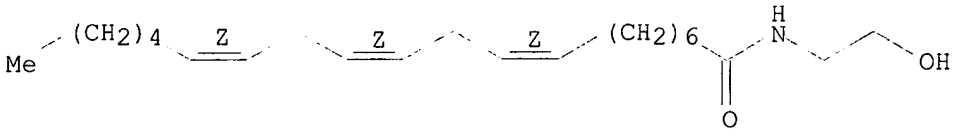
REFERENCE 8: 124:83059

REFERENCE 9: 123:335742

REFERENCE 10: 123:306385

L147 ANSWER 28 OF 45 REGISTRY COPYRIGHT 2003 ACS
RN **150314-34-4** REGISTRY
CN 8,11,14-Eicosatrienamide, N-(2-hydroxyethyl)-, (8Z,11Z,14Z)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 8,11,14-Eicosatrienamide, N-(2-hydroxyethyl)-, (Z,Z,Z)-
FS STEREOSEARCH
MF **C22 H39 N O2**
SR CA
LC STN Files: CA, CAPLUS, CHEMCATS, CSCHEM, MEDLINE, TOXCENTER, USPATFULL

Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

17 REFERENCES IN FILE CA (1962 TO DATE)
17 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:228362

REFERENCE 2: 137:226746

REFERENCE 3: 134:95508

REFERENCE 4: 131:100242

REFERENCE 5: 126:233751

REFERENCE 6: 126:166092

REFERENCE 7: 126:54735

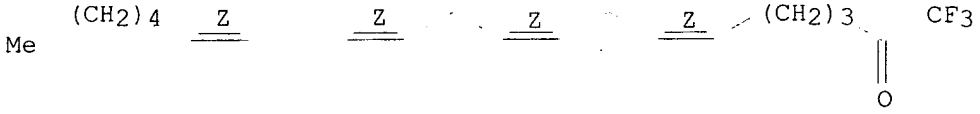
REFERENCE 8: 124:83059

REFERENCE 9: 124:75563

REFERENCE 10: 123:329890

L147 ANSWER 29 OF 45 REGISTRY COPYRIGHT 2003 ACS
RN **149301-79-1** REGISTRY
CN 6,9,12,15-Heneicosatetraen-2-one, 1,1,1-trifluoro-, (6Z,9Z,12Z,15Z)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 6,9,12,15-Heneicosatetraen-2-one, 1,1,1-trifluoro-, (all-Z)-
OTHER NAMES:
CN AN 20579
CN Arachidonyl trifluoromethyl ketone
CN BM 162353
CN L 734575
FS STEREOSEARCH
MF **C21 H31 F3 O**
SR CA
LC STN Files: BIOSIS, CA, CANCERLIT, CAPLUS, CHEMCATS, CSCHEM, MEDLINE, TOXCENTER, USPATFULL

Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

49 REFERENCES IN FILE CA (1962 TO DATE)
49 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:382699

REFERENCE 2: 137:195936

REFERENCE 3: 137:163801

REFERENCE 4: 137:119329

REFERENCE 5: 136:350118

REFERENCE 6: 136:83159

REFERENCE 7: 136:648

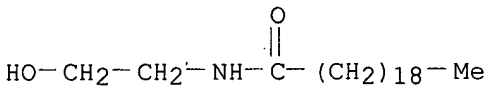
REFERENCE 8: 135:352418

REFERENCE 9: 135:316273

REFERENCE 10: 135:239640

L147 ANSWER 30 OF 45 REGISTRY COPYRIGHT 2003 ACS
RN **94421-69-9** REGISTRY
CN Eicosanamide, N-(2-hydroxyethyl)- (9CI) (CA INDEX NAME)
OTHER NAMES:

CN N-(2-Hydroxyethyl)eicosanamide
CN N-Arachidoylethanolamine
FS 3D CONCORD
MF **C22 H45 N O2**
CI COM
LC STN Files: CA, CAPLUS, CHEMCATS, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

7 REFERENCES IN FILE CA (1962 TO DATE)
7 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 134:337133

REFERENCE 2: 131:53936

REFERENCE 3: 124:75563

REFERENCE 4: 123:335742

REFERENCE 5: 123:102027

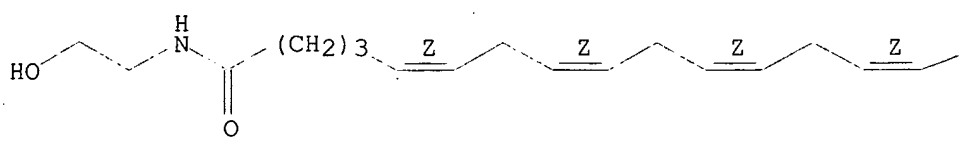
REFERENCE 6: 122:259398

REFERENCE 7: 102:77260

L147 ANSWER 31 OF 45 REGISTRY COPYRIGHT 2003 ACS
RN **94421-68-8** REGISTRY
CN 5,8,11,14-Eicosatetraenamide, N-(2-hydroxyethyl)-, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 5,8,11,14-Eicosatetraenamide, N-(2-hydroxyethyl)-, (all-Z)-
OTHER NAMES:
CN Anandamide
CN Arachidonylethanolamide
CN N-(2-Hydroxyethyl)arachidonamide
CN N-(2-Hydroxyethyl)arachidonylamide
CN N-Arachidonylethanolamine
FS STEREOSEARCH
MF **C22 H37 N O2**
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAPLUS, CEN, CHEMCATS, CIN, CSCHEM, EMBASE, IPA, MEDLINE, MRCK*, PHAR, PROMT, RTECS*, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

$(CH_2)_4$
Me

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

687 REFERENCES IN FILE CA (1962 TO DATE)
19 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
692 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 138:85363

REFERENCE 2: 138:82766

REFERENCE 3: 138:82765

REFERENCE 4: 138:82763

REFERENCE 5: 138:82755

REFERENCE 6: 138:82754

REFERENCE 7: 138:82753

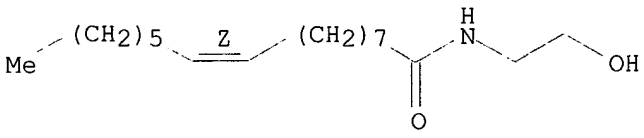
REFERENCE 8: 138:66729

REFERENCE 9: 138:66713

REFERENCE 10: 138:44709

L147 ANSWER 32 OF 45 REGISTRY COPYRIGHT 2003 ACS
RN **94421-67-7** REGISTRY
CN 9-Hexadecenamide, N-(2-hydroxyethyl)-, (9Z)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 9-Hexadecenamide, N-(2-hydroxyethyl)-, (Z)-
FS STEREOSEARCH
MF **C18 H35 N O2**
LC STN Files: CA, CAPLUS, USPATFULL

Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

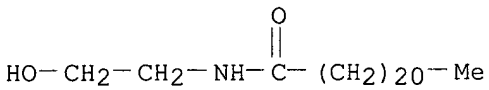
3 REFERENCES IN FILE CA (1962 TO DATE)
3 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 135:190325

REFERENCE 2: 116:59905

REFERENCE 3: 102:77260

L147 ANSWER 33 OF 45 REGISTRY COPYRIGHT 2003 ACS
RN **94109-05-4** REGISTRY
CN Docosanamide, N-(2-hydroxyethyl)- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF **C24 H49 N O2**
CI COM
SR Commission of European Communities
LC STN Files: CA, CAPLUS, CHEMLIST, USPATFULL
Other Sources: EINECS**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

6 REFERENCES IN FILE CA (1962 TO DATE)
6 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 134:267694

REFERENCE 2: 131:117751

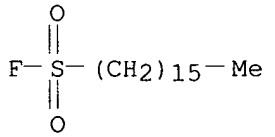
REFERENCE 3: 131:103773

REFERENCE 4: 123:335742

REFERENCE 5: 103:200696

REFERENCE 6: 102:77260

L147 ANSWER 34 OF 45 REGISTRY COPYRIGHT 2003 ACS
RN **86855-26-7** REGISTRY
CN 1-Hexadecanesulfonyl fluoride (9CI) (CA INDEX NAME)
OTHER NAMES:
CN AM 374
FS 3D CONCORD
MF **C16 H33 F O2 S**
LC STN Files: BEILSTEIN*, BIOSIS, CA, CAPLUS, CASREACT, MEDLINE, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

17 REFERENCES IN FILE CA (1962 TO DATE)
2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
17 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:289031

REFERENCE 2: 137:150258

REFERENCE 3: 136:648

REFERENCE 4: 135:205570

REFERENCE 5: 134:336170

REFERENCE 6: 133:292844

REFERENCE 7: 132:44870

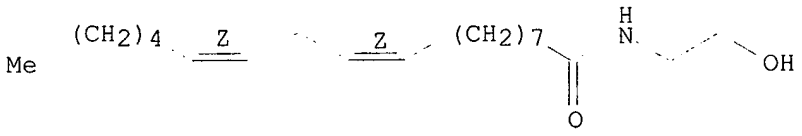
REFERENCE 8: 130:34884

REFERENCE 9: 128:30406

REFERENCE 10: 126:220293

L147 ANSWER 35 OF 45 REGISTRY COPYRIGHT 2003 ACS
RN 68171-52-8 REGISTRY
CN 9,12-Octadecadienamide, N-(2-hydroxyethyl)-, (9Z,12Z)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 9,12-Octadecadienamide, N-(2-hydroxyethyl)-, (Z,Z)-
CN Linoleamide, N-(2-hydroxyethyl)- (7CI)
OTHER NAMES:
CN **Linoleic acid monoethanolamide**
CN N-(2-Hydroxyethyl)-(Z,Z)-9,12-octadecadienamide
CN N-(2-Hydroxyethyl)linoleamide
CN **N-Linoleoylethanolamine**
FS STEREOSEARCH
MF **C20 H37 N O2**
LC STN Files: AGRICOLA, BEILSTEIN*, BIOSIS, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CSCHEM, MEDLINE, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**, NDSL**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

52 REFERENCES IN FILE CA (1962 TO DATE)
52 REFERENCES IN FILE CAPLUS (1962 TO DATE)
2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 137:382306

REFERENCE 2: 137:306533

REFERENCE 3: 137:289031

REFERENCE 4: 137:98641

REFERENCE 5: 137:83429

REFERENCE 6: 137:83428

REFERENCE 7: 137:83427

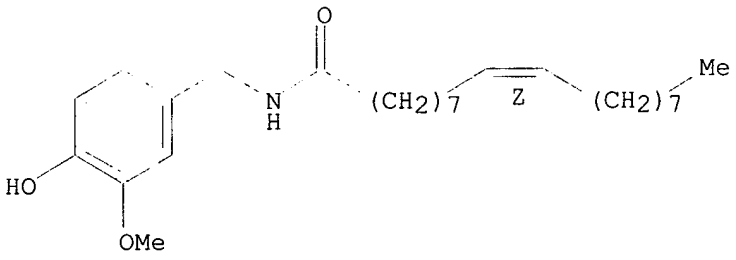
REFERENCE 8: 137:83423

REFERENCE 9: 136:340738

REFERENCE 10: 136:148275

L147 ANSWER 36 OF 45 REGISTRY COPYRIGHT 2003 ACS
RN **58493-49-5** REGISTRY
CN 9-Octadecenamide, N-[(4-hydroxy-3-methoxyphenyl)methyl]-, (9Z)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 9-Octadecenamide, N-[(4-hydroxy-3-methoxyphenyl)methyl]-, (Z)-
OTHER NAMES:
CN N-Vanillyl oleic amide
CN N-Vanillyloleamide
CN NE 19550
CN Olvanil
FS STEREOSEARCH
MF **C26 H43 N O3**
LC STN Files: AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAPLUS, CASREACT, CHEMCATS, CSCHEM, DDFU, DRUGNL, DRUGU, DRUGUPDATES, EMBASE, IPA, MEDLINE, PHAR, PROMT, RTECS*, TOXCENTER, USAN, USPATFULL
(*File contains numerically searchable property data)
Other Sources: WHO

Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

54 REFERENCES IN FILE CA (1962 TO DATE)
55 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:381506

REFERENCE 2: 137:216814

REFERENCE 3: 136:363865

REFERENCE 4: 136:166383

REFERENCE 5: 136:161001

REFERENCE 6: 135:366583

REFERENCE 7: 135:283144

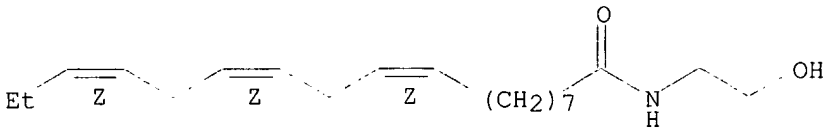
REFERENCE 8: 135:283135

REFERENCE 9: 135:190415

REFERENCE 10: 135:132395

L147 ANSWER 37 OF 45 REGISTRY COPYRIGHT 2003 ACS
RN 57086-93-8 REGISTRY
CN 9,12,15-Octadecatrienamide, N-(2-hydroxyethyl)-, (9Z,12Z,15Z)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 9,12,15-Octadecatrienamide, N-(2-hydroxyethyl)-, (Z,Z,Z)-
OTHER NAMES:
CN **N-Linolenoylethanolamine**
FS STEREOSEARCH
MF **C20 H35 N O2**
LC STN Files: BEILSTEIN*, CA, CAPLUS, CHEMCATS, CSCHEM, IFICDB, IFIPAT, IFIUDB, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)

Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

15 REFERENCES IN FILE CA (1962 TO DATE)
15 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:358156

REFERENCE 2: 137:358140

REFERENCE 3: 137:306533

REFERENCE 4: 136:340738

REFERENCE 5: 135:206912

REFERENCE 6: 134:350865

REFERENCE 7: 133:70561

REFERENCE 8: 126:198536

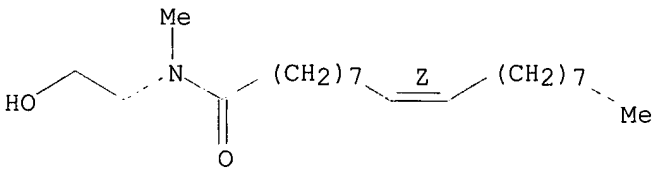
REFERENCE 9: 126:166092

REFERENCE 10: 125:284346

L147 ANSWER 38 OF 45 REGISTRY COPYRIGHT 2003 ACS
RN **35627-93-1** REGISTRY
CN 9-Octadecenamide, N-(2-hydroxyethyl)-N-methyl-, (9Z)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 9-Octadecenamide, N-(2-hydroxyethyl)-N-methyl-, (Z)-

OTHER NAMES:
CN (Z)-N-(2-Hydroxyethyl)-N-methyl-9-octadecenamide
CN N-(2-Hydroxyethyl)-N-methyloleamide
CN N-Methyl-N-(2-hydroxyethyl)oleamide
CN N-Oleoyl-N-methylethanolamine
FS STEREOSEARCH
MF **C21 H41 N O2**
LC STN Files: BEILSTEIN*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)

Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

15 REFERENCES IN FILE CA (1962 TO DATE)
15 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:296605

REFERENCE 2: 137:296604

REFERENCE 3: 137:296590

REFERENCE 4: 137:289049

REFERENCE 5: 137:281064

REFERENCE 6: 127:144544

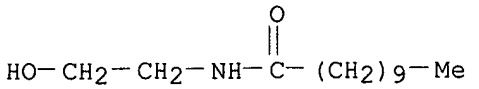
REFERENCE 7: 126:159031

REFERENCE 8: 108:160660

REFERENCE 9: 87:707

REFERENCE 10: 81:153664

L147 ANSWER 39 OF 45 REGISTRY COPYRIGHT 2003 ACS
RN **28245-87-6** REGISTRY
CN Undecanamide, N-(2-hydroxyethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN Undecanoic acid ethanolamide
CN Undecanoic acid monoethanolamide
FS 3D CONCORD
MF **C13 H27 N O2**
CI COM
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

14 REFERENCES IN FILE CA (1962 TO DATE)
14 REFERENCES IN FILE CAPLUS (1962 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 134:337133

REFERENCE 2: 134:95508

REFERENCE 3: 133:94636

REFERENCE 4: 131:100242

REFERENCE 5: 129:199580

REFERENCE 6: 127:351208

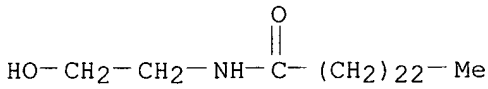
REFERENCE 7: 125:151129

REFERENCE 8: 124:333075

REFERENCE 9: 102:226405

REFERENCE 10: 101:178052

L147 ANSWER 40 OF 45 REGISTRY COPYRIGHT 2003 ACS
RN **10015-68-6** REGISTRY
CN Tetracosanamide, N-(2-hydroxyethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)
FS 3D CONCORD
MF **C26 H53 N O2**
LC STN Files: CA, CAOLD, CAPLUS



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

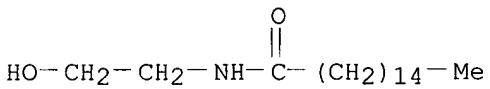
2 REFERENCES IN FILE CA (1962 TO DATE)
2 REFERENCES IN FILE CAPLUS (1962 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 123:335742

REFERENCE 2: 64:69160

L147 ANSWER 41 OF 45 REGISTRY COPYRIGHT 2003 ACS
RN **544-31-0** REGISTRY
CN Hexadecanamide, N-(2-hydroxyethyl)- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN (Hydroxyethyl)palmitamide
CN 2-(Palmitoylamino)ethanol

CN 2-Palmitamidoethanol
CN 2: PN: WO02064106 PAGE: 14 claimed sequence
CN AM 3112
CN Impulsin
CN Loramine P 256
CN N-(2-Hydroxyethyl)hexadecanamide
CN N-(2-Hydroxyethyl)palmitamide
CN N-Hexadecanoylethanolamine
CN N-Palmitoylethanolamine
CN Palmidrol
CN Palmitic acid monoethanolamide
CN Palmitic monoethanolamide
CN Palmitoylethanolamide
FS 3D CONCORD
MF **C18 H37 N O2**
CI COM
LC STN Files: AGRICOLA, BEILSTEIN*, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, DDFU, DRUGU, EMBASE, IFICDB, IFIPAT, IFIUDB, MEDLINE, MRCK*, SPECINFO, TOXCENTER, USAN, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**, NDSL**, TSCA**, WHO
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

266 REFERENCES IN FILE CA (1962 TO DATE)
5 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
267 REFERENCES IN FILE CAPLUS (1962 TO DATE)
17 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 138:82754

REFERENCE 2: 138:75042

REFERENCE 3: 137:383277

REFERENCE 4: 137:382306

REFERENCE 5: 137:358156

REFERENCE 6: 137:358140

REFERENCE 7: 137:320625

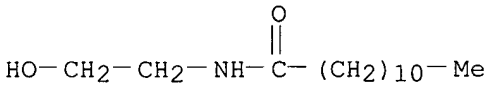
REFERENCE 8: 137:306533

REFERENCE 9: 137:289049

REFERENCE 10: 137:289031

L147 ANSWER 42 OF 45 REGISTRY COPYRIGHT 2003 ACS
RN **142-78-9** REGISTRY
CN Dodecanamide, N-(2-hydroxyethyl)- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

OTHER NAMES:
CN 2-Dodecanamidoethanol
CN Alkamide L 203
CN Amisol LME
CN Comperlan LM
CN Copramyl
CN Crillon LME
CN Cyclomide LM
CN Lauramide MEA
CN Lauric acid ethanolamide
CN Lauric acid monoethanolamide
CN Lauric acid monoethanolamine
CN Lauric ethylolamide
CN Lauric monoethanolamide
CN Lauric N-(2-hydroxyethyl)amide
CN Lauridit LM
CN Lauroyl monoethanolamide
CN Lauryl monoethanolamide
CN Laurylamidoethanol
CN Laurylethanolamide
CN Mackamide LMM
CN N-(.beta.-Hydroxyethyl)dodecanamide
CN N-(2-Hydroxyethyl)dodecanamide
CN N-(2-Hydroxyethyl)lauramide
CN N-Dodecanoylethanolamine
CN N-Lauroylethanolamine
CN Rewomid L 203
CN Rolamid CM
CN Stabilor CMH
CN Steinamid L 203
CN Tohol N 120
CN Ultrapole H
CN Vistalan
FS 3D CONCORD
DR 8028-85-1, 123175-08-6, 15517-65-4, 65256-27-1
MF **C14 H29 N O2**
CI COM
LC STN Files: AGRICOLA, AQUIRE, BEILSTEIN*, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CIN, CSCHEM, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, MEDLINE, MSDS-OHS, SPECINFO, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

366 REFERENCES IN FILE CA (1962 TO DATE)
11 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
368 REFERENCES IN FILE CAPLUS (1962 TO DATE)
31 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 138:75042

REFERENCE 2: 138:28952

REFERENCE 3: 137:346926

REFERENCE 4: 137:339313

REFERENCE 5: 137:306533

REFERENCE 6: 137:296605

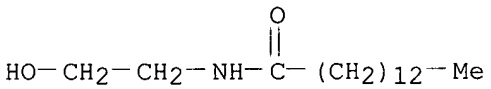
REFERENCE 7: 137:195813

REFERENCE 8: 137:83362

REFERENCE 9: 136:387754

REFERENCE 10: 136:359447

L147 ANSWER 43 OF 45 REGISTRY COPYRIGHT 2003 ACS
RN **142-58-5** REGISTRY
CN Tetradecanamide, N-(2-hydroxyethyl)- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN AM 3165
CN Comperlan MM
CN Loramine MY 228
CN Myristamide MEA
CN Myristic acid monoethanolamide
CN Myristic monoethanolamide
CN Myristyl monoethanolamide
CN N-(2-Hydroxyethyl)myristamide
CN N-(2-Hydroxyethyl)tetradecanamide
CN N-Myristoylethanolamine
CN N-Tetradecanoylethanolamine
CN Schercomid MME
FS 3D CONCORD
MF **C16 H33 N O2**
CI COM
LC STN Files: AGRICOLA, BEILSTEIN*, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, HSDB*, PROMT, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

107 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
107 REFERENCES IN FILE CAPLUS (1962 TO DATE)
15 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 138:85312

REFERENCE 2: 138:75042

REFERENCE 3: 137:306533

REFERENCE 4: 137:195813

REFERENCE 5: 135:190325

REFERENCE 6: 135:147030

REFERENCE 7: 135:50488

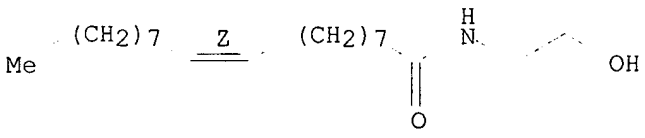
REFERENCE 8: 135:45243

REFERENCE 9: 134:337133

REFERENCE 10: 134:267694

L147 ANSWER 44 OF 45 REGISTRY COPYRIGHT 2003 ACS
RN **111-58-0** REGISTRY
CN 9-Octadecenamide, N-(2-hydroxyethyl)-, (9Z)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 9-Octadecenamide, N-(2-hydroxyethyl)-, (Z)-
CN Oleamide, N-(2-hydroxyethyl)- (6CI, 7CI, 8CI)
OTHER NAMES:
CN AM 3101
CN N-(2-Hydroxyethyl)oleamide
CN N-Oleoyl-2-aminoethanol
CN N-Oleoylethanolamine
CN Oleamide MEA
CN Oleic acid ethanolamide
CN Oleic acid monoethanolamide
FS STEREOSEARCH
MF **C20 H39 N O2**
CI COM
LC STN Files: BEILSTEIN*, BIOSIS, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CSCHEM, IFICDB, IFIPAT, IFIUDB, MEDLINE, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

211 REFERENCES IN FILE CA (1962 TO DATE)
11 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
211 REFERENCES IN FILE CAPLUS (1962 TO DATE)
16 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 138:75042

REFERENCE 2: 138:44709

REFERENCE 3: 137:383277

REFERENCE 4: 137:358156

REFERENCE 5: 137:358140

REFERENCE 6: 137:306533

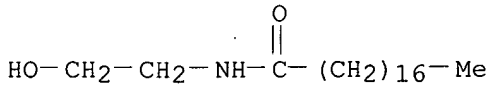
REFERENCE 7: 137:289049

REFERENCE 8: 137:289031

REFERENCE 9: 137:284372

REFERENCE 10: 137:228362

L147 ANSWER 45 OF 45 REGISTRY COPYRIGHT 2003 ACS
RN **111-57-9** REGISTRY
CN Octadecanamide, N-(2-hydroxyethyl)- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN Alkamide S 280
CN AM 1105
CN Amisol SME
CN Ceramid
CN Clindrol 200MS
CN Comperlan HS
CN Cycloamide SM
CN Emcol 70
CN Loramine S 280
CN Lubsize K 12
CN Mackamide SMA
CN Marlamid M 18
CN Monamid S
CN Monoethanolstearamide
CN N-(2-Hydroxyethyl)octadecanamide
CN N-(2-Hydroxyethyl)stearamide
CN N-Octadecanoylethanolamine
CN N-Stearoylethanolamine
CN Onyx Wax EL
CN Profan SME
CN Rewomid S 280
CN S 280
CN Stearamide MEA
CN Stearic acid monoethanolamide
CN Stearic ethanolamide
CN Stearic ethylolamide
CN Stearic monoethanolamide
CN Stearic monoethanolamine
CN Stearoylmonoethanolamide
CN Witcamide 70
FS 3D CONCORD
DR 8038-89-9
MF **C20 H41 N O2**
CI COM
LC STN Files: AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CIN, CSCHEM, IFICDB, IFIPAT, IFIUDB, MEDLINE, MSDS-OHS, PROMT, TOXCENTER, USPAT2, USPATFULL, VTB
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

291 REFERENCES IN FILE CA (1962 TO DATE)
11 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
293 REFERENCES IN FILE CAPLUS (1962 TO DATE)
21 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 138:75042

REFERENCE 2: 137:382306

REFERENCE 3: 137:306533

REFERENCE 4: 137:276967

REFERENCE 5: 137:206204

REFERENCE 6: 137:195813

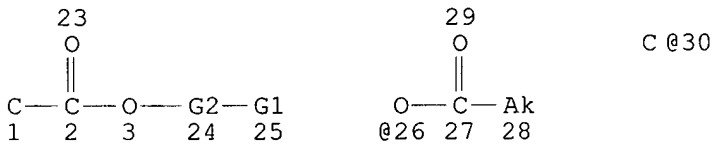
REFERENCE 7: 136:379605

REFERENCE 8: 136:351642

REFERENCE 9: 136:330297

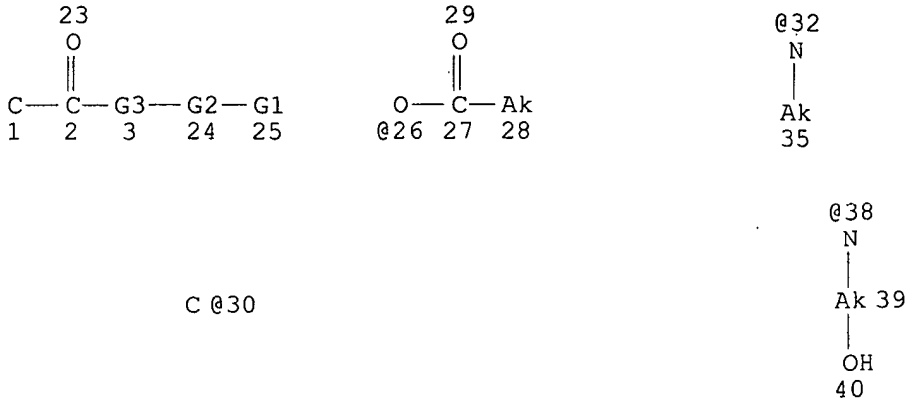
REFERENCE 10: 136:311698

```
=> fil reg
FILE 'REGISTRY' ENTERED AT 16:53:38 ON 13 FEB 2003
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2003 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES:   12 FEB 2003  HIGHEST RN 489395-53-1
DICTIONARY FILE UPDATES:  12 FEB 2003  HIGHEST RN 489395-53-1

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

Crossover limits have been increased.  See HELP CROSSOVER for details.

Experimental and calculated property data are now available.  See HELP
PROPERTIES for more information.  See STNote 27, Searching Properties
in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

=> d sta que l79
L44             SCR 1839 OR 2043 OR 2039 OR 2054 OR 2127 OR 1918 OR 2040 O
R 2050 OR 2049 OR 2048 OR 2053 OR 2052 OR 2051 OR 2041 OR 2079
L66             STR
```




```
VAR G1=OH/26
REP G2=(2-4) 30
NODE ATTRIBUTES:
NSPEC   IS RC     AT   1
CONNECT IS M1  RC AT   1
CONNECT IS M1  RC AT  30
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  11

STEREO ATTRIBUTES: NONE
L68             STR
```

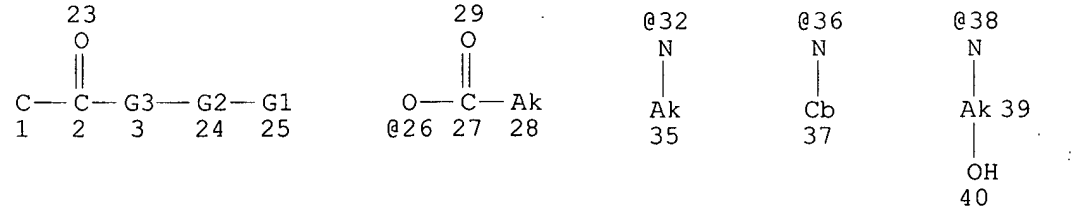
Jan Delaval
Reference Librarian
Biotechnology & Chemical Library
CM1 1E07 – 703-308-4498
jan.delaval@uspto.gov

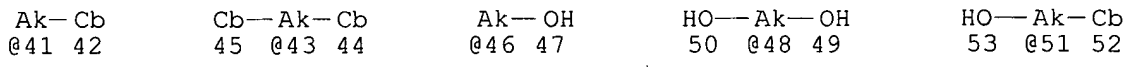


VAR G1=OH/26
REP G2=(2-4) 30
VAR G3=NH/32/36/38
NODE ATTRIBUTES:
NSPEC IS RC AT 1
CONNECT IS M1 RC AT 1
CONNECT IS M1 RC AT 30
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 18

STEREO ATTRIBUTES: NONE
L70 3099 SEA FILE=REGISTRY CSS FUL L68 NOT L44
L71 37324 SEA FILE=REGISTRY CSS FUL L66 NOT L44
L73 40320 SEA FILE=REGISTRY ABB=ON PLU=ON L70 OR L71
L74 STR

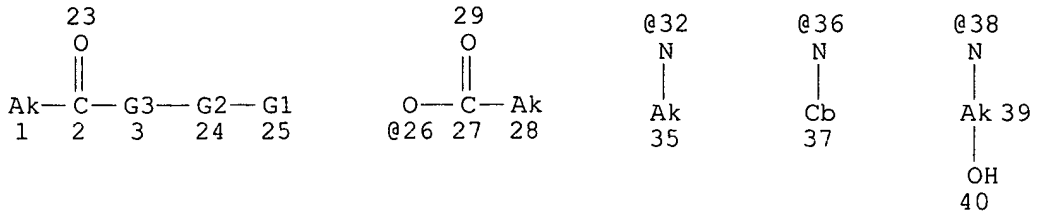


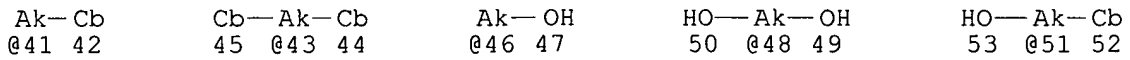


VAR G1=OH/26
VAR G2=AK/41/43/46/48/51
VAR G3=O/NH/32/36/38
NODE ATTRIBUTES:
NSPEC IS RC AT 1
CONNECT IS M1 RC AT 1
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 30

STEREO ATTRIBUTES: NONE
L76 13224 SEA FILE=REGISTRY SUB=L73 CSS FUL L74
L77 STR



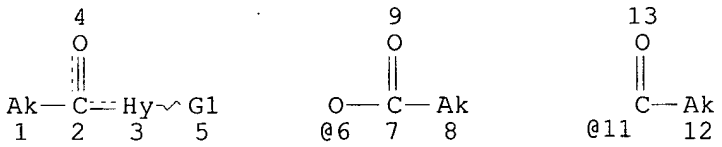


VAR G1=OH/26
VAR G2=AK/41/43/46/48/51
VAR G3=O/NH/32/36/38
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED
ECOUNT IS M11 C AT 1

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 30

STEREO ATTRIBUTES: NONE
L78 1767 SEA FILE=REGISTRY SUB=L76 CSS FUL L77
L79 1765 SEA FILE=REGISTRY ABB=ON PLU=ON L78/COM

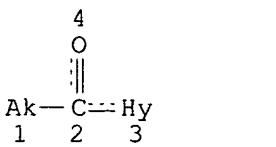
=> d sta que l97
L44 SCR 1839 OR 2043 OR 2039 OR 2054 OR 2127 OR 1918 OR 2040 O
R 2050 OR 2049 OR 2048 OR 2053 OR 2052 OR 2051 OR 2041 OR 2079
L81 STR



VAR G1=OH/6/11
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT IS MCY AT 3
DEFAULT ECLEVEL IS LIMITED
ECOUNT IS M11 C AT 1

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 12

STEREO ATTRIBUTES: NONE
L87 STR

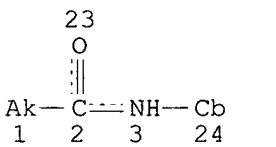


NODE ATTRIBUTES:
CONNECT IS M1 RC AT 3
DEFAULT MLEVEL IS ATOM
GGCAT IS MCY AT 3
DEFAULT ECLEVEL IS LIMITED
ECOUNT IS M11-X29 C AT 1

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 4

STEREO ATTRIBUTES: NONE
L88 SCR 1838
L90 468272 SEA FILE=REGISTRY ABB=ON PLU=ON (NC2OC2 OR NCOC2 OR NC2 OR NC3 OR NC4 OR NC5 OR OC2 OR OC3 OR OC4 OR OC5)/ES AND 1/NR NOT ((PMS OR IDS OR MNS OR MXS OR AYS OR TIS)/CI OR SQL/FA)
L93 1182 SEA FILE=REGISTRY SUB=L90 CSS FUL L87 AND L88 NOT L44
L94 1175 SEA FILE=REGISTRY ABB=ON PLU=ON L93/COM
L96 15 SEA FILE=REGISTRY SUB=L94 CSS FUL L81
L97 10 SEA FILE=REGISTRY ABB=ON PLU=ON L96 NOT (PYRIDIN? OR C24H41NO2 OR C17H31NO2)

=> d sta que l53
L33 STR

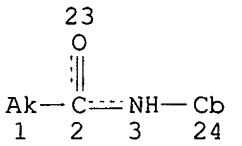


NODE ATTRIBUTES:
CONNECT IS M1 RC AT 24
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED
ECOUNT IS M18-X22 C AT 1
ECOUNT IS M3-X6 C AT 24

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 5

STEREO ATTRIBUTES: NONE
L38 SCR 1839 OR 2043 OR 2039 OR 2054 OR 2127
L46 51250 SEA FILE=REGISTRY ABB=ON PLU=ON (C3 OR C4 OR C5 OR C6)/ES AND (N AND O)/ELS AND 1/NR AND 1/NC AND C>=22 NOT ((PMS OR MNS OR MXS OR IDS OR AYS OR TIS)/CI OR SQL/FA)
L49 SCR 1199 AND 2004 AND 1992 AND 1838
L52 264 SEA FILE=REGISTRY SUB=L46 CSS FUL L33 AND L49 NOT L38
L53 188 SEA FILE=REGISTRY ABB=ON PLU=ON L52/COM

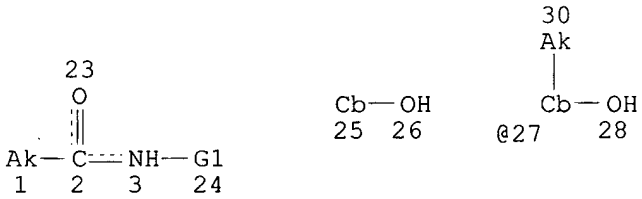
=> d sta que l59
L33 STR



NODE ATTRIBUTES:
CONNECT IS M1 RC AT 24
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED
ECOUNT IS M18-X22 C AT 1
ECOUNT IS M3-X6 C AT 24

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 5

STEREO ATTRIBUTES: NONE
L38 SCR 1839 OR 2043 OR 2039 OR 2054 OR 2127
L46 51250 SEA FILE=REGISTRY ABB=ON PLU=ON (C3 OR C4 OR C5 OR C6)/ES AND (N AND O)/ELS AND 1/NR AND 1/NC AND C>=22 NOT ((PMS OR MNS OR MXS OR IDS OR AYS OR TIS)/CI OR SQL/FA)
L49 SCR 1199 AND 2004 AND 1992 AND 1838
L52 264 SEA FILE=REGISTRY SUB=L46 CSS FUL L33 AND L49 NOT L38
L53 188 SEA FILE=REGISTRY ABB=ON PLU=ON L52/COM
L56 STR

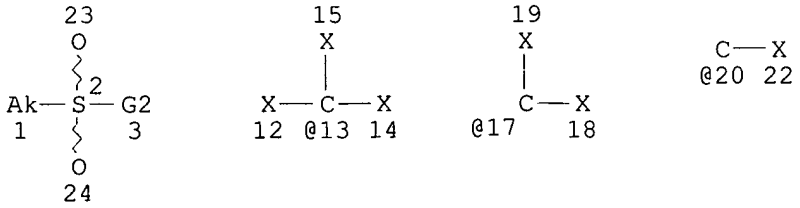


VAR G1=CB/25/27
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED
ECOUNT IS M18-X22 C AT 1

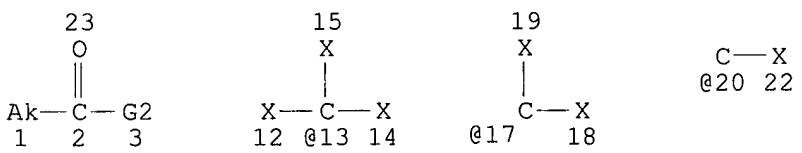
GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 10

STEREO ATTRIBUTES: NONE
L58 33 SEA FILE=REGISTRY SUB=L53 CSS FUL L56
L59 31 SEA FILE=REGISTRY ABB=ON PLU=ON L58/COM

=> d sta que l26
L3 SCR 1838 OR 1992 OR 2016 OR 2026 OR 2043 OR 2039 OR 2054
L18 STR



```
VAR G2=X/20/17/13
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED
ECOUNT  IS M6-X22 C  AT   1

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  14

STEREO ATTRIBUTES: NONE
L26         150 SEA FILE=REGISTRY CSS FUL L18 NOT L3

100.0% PROCESSED   6867 ITERATIONS                          150 ANSWERS
SEARCH TIME: 00.00.01


=> d sta que l32
L20             STR
```




```
VAR G2=X/20/17/13
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED
ECOUNT  IS M6-X22 C  AT   1

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  13

STEREO ATTRIBUTES: NONE
L28             SCR 1838 OR 1992 OR 2005 OR 2016 OR 2026 OR 2043 OR 2039 O
R 2054 OR 1700 OR 1199 OR 2021
L29             SCR 1929
L31         300 SEA FILE=REGISTRY CSS FUL L20 AND L29 NOT L28
L32         297 SEA FILE=REGISTRY ABB=ON  PLU=ON  L31/COM


=> d his

     (FILE 'HOME' ENTERED AT 13:49:37 ON 13 FEB 2003)
                DEL HIS

     FILE 'REGISTRY' ENTERED AT 13:50:38 ON 13 FEB 2003
                ACT DONNA/Q
               ---------
L1              STR
               ---------
L2              STR L1
L3              SCR 1838 OR 1992 OR 2016 OR 2026 OR 2043 OR 2039 OR 2054
L4           40 S L2 NOT L3 CSS SAM
L5            8 S L4/COM
L6              SCR 1199
L7           30 S L2 NOT (L3 OR L6) CSS SAM
L8            9 S L7/COM
L9              STR L2
```

```
L10             SCR 1199 OR 1302 OR 1304
L11          15 S L9 NOT (L3 OR L10) CSS SAM
L12           5 S L11/COM
L13          10 S L11 NOT L12
L14             SCR 1199 OR 1302 OR 1304 OR 1700 OR 1812
L15          13 S L9 NOT (L3 OR L14) CSS SAM
L16           7 S L15/COM
L17           6 S L15 NOT L16
L18             STR L9
L19           2 S L18 CSS SAM
L20             STR L18
L21           4 S L20 CSS
L22           7 S (L18 OR L20) NOT (L3 OR L14) CSS SAM
L23          22 S (L18 OR L20) NOT L3 CSS
L24          21 S L23/COM
L25             QUE (L18 OR L20) NOT L3
L26         150 S L18 NOT L3 CSS FUL
L27             QUE L20 NOT L3
L28             SCR 1838 OR 1992 OR 2005 OR 2016 OR 2026 OR 2043 OR 2039 OR 205
L29             SCR 1929
L30          15 S L20 AND L29 NOT L28 CSS
L31         300 S L20 AND L29 NOT L28 CSS FUL
                SAV L26 JAGOE864A/A
                SAV L31 JAGOE864B/A
L32         297 S L31/COM
L33             STR L20
L34           0 S L33 CSS
L35             SCR 1848 OR 1852 OR 1855 OR 1867
L36             SCR 1199 AND 2004 AND 1992 AND 1838  AND 1199
L37             SCR 1839 OR 1993 OR 2005 OR 2016 OR 2026 OR 2021 OR 2043 OR 203
L38             SCR 1839 OR 2043 OR 2039 OR 2054 OR 2127
L39           1 S L33 AND L35 AND L36 NOT L38 CSS SAM
L40             SCR 1839 OR 2043 OR 2039 OR 2054 OR 2127 OR 1918 OR 2040 OR 205
L41           1 S L33 AND L35 AND L36 NOT L40 CSS
L42             SCR 1839 OR 2043 OR 2039 OR 2054 OR 2127 OR 1918 OR 2040 OR 205
L43           2 S L33 AND L35 AND L36 NOT L42 CSS
L44             SCR 1839 OR 2043 OR 2039 OR 2054 OR 2127 OR 1918 OR 2040 OR 205
L45           2 S L33 AND L35 AND L36 NOT L44 CSS
L46       51250 S (C3 OR C4 OR C5 OR C6)/ES AND (N AND O)/ELS AND 1/NR AND 1/NC
L47           9 S L33 CSS SAM SUB=L46
L48           6 S L47/COM
L49             SCR 1199 AND 2004 AND 1992 AND 1838
L50           9 S L33 AND L49 NOT L38 CSS SAM SUB=L46
L51           6 S L50/COM
L52         264 S L33 AND L49 NOT L38 CSS FUL SUB=L46
                SAV L52 JAGOE864C/A
L53         188 S L52/COM
L54             STR L33
L55           1 S L54 CSS SAM SUB=L53
L56             STR L54
L57           2 S L56 CSS SAM SUB=L53
L58          33 S L56 CSS FUL SUB=L53
L59          31 S L58/COM
                SAV L58 JAGOE864D/A
L60         155 S L53 NOT L58
L61             STR L33
L62          50 S L61 CSS
L63             STR L61
L64          50 S L63 CSS SAM
L65          50 S L63 NOT L44 CSS SAM
L66             STR L63
L67          50 S L66 NOT L44 CSS SAM
L68             STR L66
```

```
L69          32 S L68 NOT L44 CSS SAM
L70        3099 S L68 NOT L44 CSS FUL
                SAV L70 JAGOE864E/A
L71       37324 S L66 NOT L44 CSS FUL
                SAV TEMP L71 JAGOE864F/A
L72             STR L68
L73       40320 S L70 OR L71
L74             STR L72
L75          50 S L74 CSS SAM SUB=L73
L76       13224 S L74 CSS FUL SUB=L73
                SAV L76 TEMP JAGOE864G/A
L77             STR L74
L78        1767 S L77 CSS FUL SUB=L76
L79        1765 S L78/COM
                SAV L78 JAOGE864H/A
L80             STR
L81             STR L80
L82           0 S L80 NOT L44 CSS SAM
L83             STR L81
L84           3 S L83 NOT L44 SAM
L85             STR L83
L86           4 S L85 NOT L44 SAM
L87             STR L80
L88             SCR 1838
L89           2 S L87 AND L88 NOT L44 CSS SAM
L90      468272 S (NC2OC2 OR NCOC2 OR NC2 OR NC3 OR NC4 OR NC5 OR OC2 OR OC3 OR
L91           0 S L87 CSS SAM SUB=L90
L92           1 S L87 AND L88 NOT L44 CSS SAM SUB=L90
L93        1182 S L87 AND L88 NOT L44 CSS FUL SUB=L90
                SAV L93 JAGOE864I/A
L94        1175 S L93/COM
L95           0 S L81 CSS SAM SUB=L94
L96          15 S L81 CSS FUL SUB=L94
L97          10 S L96 NOT (PYRIDIN? OR C24H41NO2 OR C17H31NO2)
                SAV L94 JAGOE864J/A

     FILE 'HCAPLUS' ENTERED AT 16:45:27 ON 13 FEB 2003
L98        8410 S L26 OR L32 OR L53 OR L59 OR L79 OR L97
L99          61 S L98 AND (?COUGH? OR ANTITUSS? OR ANTI TUSS? OR AIRWAY OR BREA
                E COUGH/CT
L100       1244 S E3+NT OR E5+NT
L101          3 S E8
                E E5+ALL
                E E2+ALL
L102       1407 S E4+NT
L103         15 S L98 (L) THU/RL AND L99,L100,L101,L102
L104          7 S L99 AND L101-L102
L105         32 S L98 AND (PHARMACOL? OR PHARMACEUT?)/SC,SX AND L99-L104
L106         61 S L99,L103,L104,L105
L107          2 S L106 AND COUGH?
L108          7 S L106 AND (ANTITUSS? OR ANTI TUSS? OR EXPECTOR?)
L109          7 S L107,L108
L110         54 S L106 NOT L109
                SEL HIT RN L109

     FILE 'REGISTRY' ENTERED AT 16:52:04 ON 13 FEB 2003
L111         10 S E1-E10
L112          9 S L111 NOT C15H30O4

     FILE 'HCAPLUS' ENTERED AT 16:53:22 ON 13 FEB 2003
L113          6 S L112 AND L109

     FILE 'REGISTRY' ENTERED AT 16:53:38 ON 13 FEB 2003
```

```
=> fil hcaplus
FILE 'HCAPLUS' ENTERED AT 16:55:01 ON 13 FEB 2003
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2003 AMERICAN CHEMICAL SOCIETY (ACS)
```

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

```
FILE COVERS 1907 - 13 Feb 2003  VOL 138 ISS 7
FILE LAST UPDATED: 12 Feb 2003  (20030212/ED)

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.


=> d l113 all hitstr tot

L113 ANSWER 1 OF 6  HCAPLUS  COPYRIGHT 2003 ACS
AN   2002:123602  HCAPLUS
DN   136:161403
TI   Anandamide and structurally related lipids as vanilloid receptor
     modulators
IN   Hogestatt, Edward; Zygmunt, Peter
PA   Swed.
SO   U.S. Pat. Appl. Publ., 33 pp., Cont.-in-part of U.S. Ser. No. 567,034.
     CODEN: USXXCO
DT   Patent
LA   English
IC   ICM  A61K031-55
     ICS  A61K031-47; A61K031-404; A61K031-16
NCL  514627000
CC   1-12 (Pharmacology)
     Section cross-reference(s): 2
FAN.CNT 2
     PATENT NO.        KIND  DATE          APPLICATION NO.  DATE
     ---------------   ----  --------      ---------------  --------
PI   US 2002019444      A1   20020214      US 2001-849972   20010508
PRAI US 2000-567034     A2   20000508
OS   MARPAT 136:161403
AB   The invention discloses that anandamide is an endogenous ligand for
     vanilloid receptors, and esp. the vanilloid receptor VR1. Other
     structurally related lipids, such as AM404, 1-arachidonylglycerol, and
     2-arachidonylglycerol, are identified having vanilloid receptor activity
     as well. Methods of treating individuals suffering from, or at risk of
     suffering from, diseases and disorders assocd. with abnormal vanilloid
     receptor function are provided, as are methods of designing and
     identifying vanilloid receptor agonists and antagonists.
ST   anandamide lipid analog vanilloid receptor modulator
IT   Nervous system
        (Guillain-Barre syndrome, treatment of pain assocd. with; anandamide
        and structurally related lipids as vanilloid receptor modulators in
        relation to treatment of diseases assocd. with abnormal vanilloid
        receptor function)
```

IT Capsaicin receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(VR1 (vanilloid receptor 1); anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)
IT Nose
(allergic rhinitis; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)
IT Leg
(amputation, treatment of pain assocd. with; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)
IT Allergy inhibitors
Analgesics
Anti-inflammatory agents
Antiarthritics
Antiasthmatics
Antiemetics
Antimigraine agents
Antirheumatic agents
Antitumor agents
Antitussives
Antiulcer agents
Autoimmune disease
Drug delivery systems
Drug screening
Eczema
Gout
High throughput screening
Infection
Pain
Psoriasis
Urticaria
Vasodilators
Wound healing promoters
(anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)
IT Capsaicin receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)
IT Heart, disease
(angina pectoris, unstable; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)
IT Antiarteriosclerotics
(antiatherosclerotics; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)
IT Infection
(bacterial; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)
IT Shock (circulatory collapse)
(cardiogenic; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)
IT Brain, disease
(cerebrum, vasospasm, from subarachnoid hemorrhage; anandamide and

structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Headache
(cluster, treatment of pain assocd. with; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Eye, disease
(conjunctivitis; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Digestive tract
(disease, mucosal damage; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Organ, animal
(disease; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Shock (circulatory collapse)
(hemorrhagic; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Bladder
(incontinence; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Heart, disease
(infarction; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Human herpesvirus
(infection; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Intestine, disease
(inflammatory; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Mammary gland
Surgery
(mastectomy, treatment of pain assocd. with; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Pharynx
(nasopharynx, adenoids; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Adenoid
(nasopharynx; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Nerve, disease
(neuralgia; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Inflammation
(neurogenic; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Pain

(nociceptive; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Infection
(parasite; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Nerve, disease
(peripheral neuropathy, treatment of pain assocd. with; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Nerve, disease
(polyneuropathy, chronic peripheral, treatment of pain assocd. with; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Nose
(rhinitis, vasomotor; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Nose
(rhinitis; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Nerve
(sensory, vanilloid receptors of; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Shock (circulatory collapse)
(septic; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Brain, disease
(stroke; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Meninges
(subarachnoid hemorrhage, cerebral vasospasm from; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Headache
Osteoarthritis
Pruritus
(treatment of pain assocd. with; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Animal cell
(vanilloid receptors expression in; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Infection
(viral; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT **35474-99-8**, 5,8,11,14-Eicosatetraenoic acid, 2,3-dihydroxypropyl ester, (5Z,8Z,11Z,14Z)- **53847-30-6**, 2-Arachidonylglycerol 94421-68-8, Anandamide **183718-77-6**, AM 404
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal

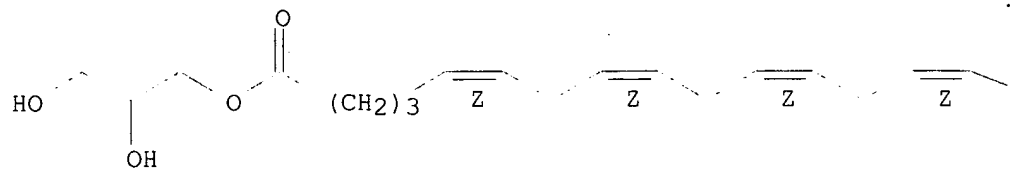
vanilloid receptor function)

IT **35474-99-8**, 5,8,11,14-Eicosatetraenoic acid, 2,3-dihydroxypropyl ester, (5Z,8Z,11Z,14Z)- **53847-30-6**, 2-Arachidonylglycerol **183718-77-6**, AM 404
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

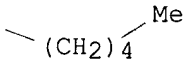
RN 35474-99-8 HCAPLUS
CN 5,8,11,14-Eicosatetraenoic acid, 2,3-dihydroxypropyl ester, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

PAGE 1-A



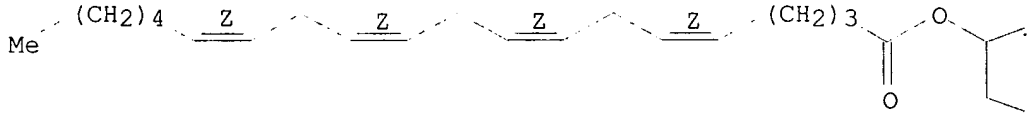
PAGE 1-B



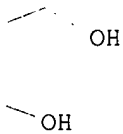
RN 53847-30-6 HCAPLUS
CN 5,8,11,14-Eicosatetraenoic acid, 2-hydroxy-1-(hydroxymethyl)ethyl ester, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

PAGE 1-A



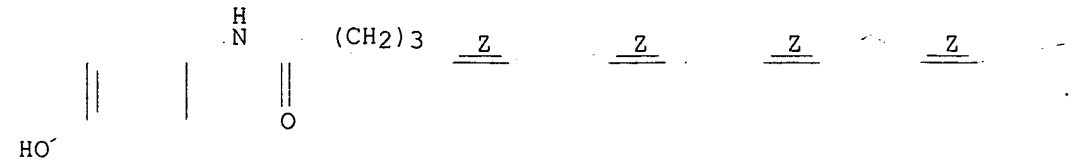
PAGE 1-B



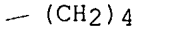
RN 183718-77-6 HCAPLUS
CN 5,8,11,14-Eicosatetraenamide, N-(4-hydroxyphenyl)-, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

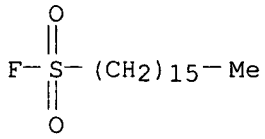


L113 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 2003 ACS
AN 2001:868275 HCAPLUS
DN 136:648
TI Cannabinoid receptor agonists for treatment of **cough** without psychoactive effects
IN Piomelli, Daniele
PA The Regents of the University of California, USA
SO PCT Int. Appl., 63 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61L009-04
ICS A61K031-135; A61K031-13
CC 1-9 (**Pharmacology**)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2001089589	A1	20011129	WO 2001-US16880	20010523
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 2002035150	A1	20020321	US 2001-864920	20010523
PRAI US 2000-206591P	P	20000523		

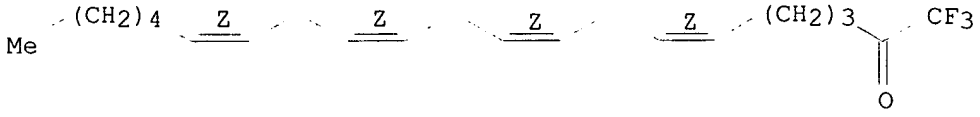
OS MARPAT 136:648
AB The invention discloses the existence of cannabinoid receptors in the **airways**, which are functionally linked to inhibition of **cough**. A method of ameliorating **cough** comprising the local administration to the upper **respiratory airways** of a subject in need of such treatment of cannabinoid compds. e.g. RC(O)X[C(R3)(R4)]nR2 where [X=NR1,O; R = (un)satd., (a)chiral, (a)cyclic, (un)substituted, C11-29 hydrocarbyl; R1, R3, R4 = C1-4 alkyl, C2-4 alkenyl, C2-4 alkynyl, C3-6 cycloalkyl, C2-4 hydroxyalkyl; R2=OH, OC(O)(C1-4 alkyl); n=2-4]. Locally acting cannabinoid agents can be administered to the **airways** of a subject to ameliorate **cough**, without causing the psychoactive effects characteristic of systemically administered cannabinoids. In addn., locally or systemically administered cannabinoid inactivation inhibitors can also be used to ameliorate **cough**. The present invention also defines conditions under which cannabinoid agents can be administered to produce **anti**

-**tussive** effects devoid of **bronchial** constriction.
ST cannabinoid receptor agonist **antitussive cough** **bronchial** constriction
IT Drug delivery systems
(aerosols; cannabinoid receptor agonists for treatment of **cough** without psychoactive effects)
IT **Bronchi**
(**bronchoconstriction**; cannabinoid receptor agonists for treatment of **cough** without psychoactive effects)
IT **Antitussives**
(cannabinoid receptor agonists for treatment of **cough** without psychoactive effects)
IT Neoplasm
(induced **cough**; cannabinoid receptor agonists for treatment of **cough** without psychoactive effects)
IT Drug delivery systems
(injections, i.v.; cannabinoid receptor agonists for treatment of **cough** without psychoactive effects)
IT Drug delivery systems
(local; cannabinoid receptor agonists for treatment of **cough** without psychoactive effects)
IT Drug delivery systems
(oral; cannabinoid receptor agonists for treatment of **cough** without psychoactive effects)
IT Cannabinoid receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(type CB1; cannabinoid receptor agonists for treatment of **cough** without psychoactive effects)
IT **Respiratory** tract
(upper; cannabinoid receptor agonists for treatment of **cough** without psychoactive effects)
IT **86855-26-7**, 1-Hexadecanesulfonyl fluoride 94421-68-8, Anandamide **149301-79-1** 150314-35-5 157182-49-5 **183718-77-6** **187223-90-1**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(cannabinoid receptor agonists for treatment of **cough** without psychoactive effects)
IT 9015-82-1, ACE
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(inhibitor-induced **cough**; cannabinoid receptor agonists for treatment of **cough** without psychoactive effects)
RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) de Petrocellis; Chemistry and Physics of Lipids 2000, V108(1-2), P191 HCAPLUS
(2) Hussain; US 4464378 A 1984 HCAPLUS
(3) Shamsuddin; J Lab And Clin Med 1997, V130(6), P615 HCAPLUS
(4) Stengel; European Journal of Pharmacology 1998, V355, P57 HCAPLUS
(5) Sugiura; Chemistry and Physics of Lipids 2000, V108(1-2), P89 HCAPLUS
(6) Zhu; Journal of Immunology 1999, V163(6), P3423 HCAPLUS
IT **86855-26-7**, 1-Hexadecanesulfonyl fluoride **149301-79-1** **183718-77-6** **187223-90-1**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(cannabinoid receptor agonists for treatment of **cough** without psychoactive effects)
RN 86855-26-7 HCAPLUS
CN 1-Hexadecanesulfonyl fluoride (9CI) (CA INDEX NAME)



RN 149301-79-1 HCAPLUS
CN 6,9,12,15-Heneicosatetraen-2-one, 1,1,1-trifluoro-, (6Z,9Z,12Z,15Z)- (9CI) (CA INDEX NAME)

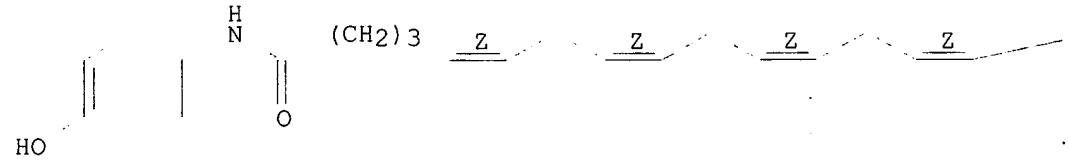
Double bond geometry as shown.



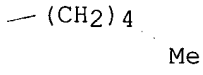
RN 183718-77-6 HCAPLUS
CN 5,8,11,14-Eicosatetraenamide, N-(4-hydroxyphenyl)-, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

PAGE 1-A



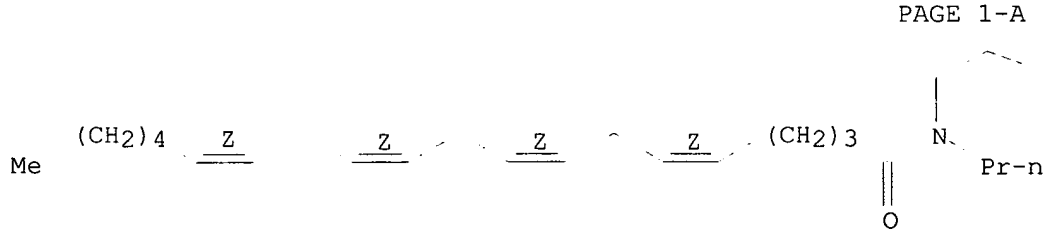
PAGE 1-B



RN 187223-90-1 HCAPLUS
CN 5,8,11,14-Eicosatetraenamide, N-(2-hydroxyethyl)-N-propyl-, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

L113 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2003 ACS
AN 2001:833079 HCAPLUS
DN 135:352838
TI Anandamide and structurally related lipids as vanilloid receptor modulators
IN Hogestatt, Edward; Zygmunt, Peter
PA Forskarpatent I Syd AB, Swed.
SO PCT Int. Appl., 107 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K031-16
ICS A61K031-167; A61K031-232
CC 1-12 (**Pharmacology**)
FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2001085158	A2	20011115	WO 2001-IB1267	20010508
WO 2001085158	A3	20020613		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRAI US 2000-567034 A 20000508
OS MARPAT 135:352838
AB The invention discloses that anandamide is an endogenous ligand for vanilloid receptors, and esp. the vanilloid receptor VR1. Other structurally related lipids, such as AM404, 1-arachidonylglycerol, and 2-arachidonylglycerol, are identified having vanilloid receptor activity as well. Methods of treating individuals suffering from, or at risk of suffering from, diseases and disorders assocd. with abnormal vanilloid receptor function are provided, as are methods of designing and identifying vanilloid receptor agonists and antagonists.
ST anandamide lipid analog vanilloid receptor modulator
IT Nervous system
(Guillain-Barre syndrome, treatment of pain assocd. with; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)
IT Capsaicin receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(VR1 (vanilloid receptor 1); anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)
IT Nose
(allergic rhinitis; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)
IT Leg
(amputation, treatment of pain assocd. with; anandamide and

structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Allergy inhibitors
Analgesics
Anti-inflammatory agents
Antiarthritics
Antiasthmatics
Antiemetics
Antimigraine agents
Antirheumatic agents
Antitumor agents
Antitussives
Antiulcer agents
Autoimmune disease
Drug delivery systems
Eczema
Gout
Infection
Pain
Psoriasis
Urticaria
Wound healing promoters
(anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Capsaicin receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Heart, disease
(angina pectoris, unstable; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Antiarteriosclerotics
(antiatherosclerotics; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Infection
(bacterial; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Shock (circulatory collapse)
(cardiogenic; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Brain, disease
(cerebrum, vasospasm, from subarachnoid hemorrhage; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Headache
(cluster, treatment of pain assocd. with; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Eye, disease
(conjunctivitis; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Digestive tract

(disease, mucosal damage; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Organ, animal
(disease; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Shock (circulatory collapse)
(hemorrhagic; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Bladder
(incontinence; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Heart, disease
(infarction; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Human herpesvirus
(infection; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Intestine, disease
(inflammatory; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Mammary gland
Surgery
(mastectomy, treatment of pain assocd. with; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Pharynx
(nasopharynx, adenoids; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Adenoid
(nasopharynx; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Nerve, disease
(neuralgia; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Inflammation
(neurogenic; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Pain
(nociceptive; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Infection
(parasite; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Nerve, disease
(peripheral neuropathy, treatment of pain assocd. with; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Nerve, disease

(polyneuropathy, chronic peripheral, treatment of pain assocd. with; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Nose
(rhinitis, vasomotor; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Nose
(rhinitis; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Shock (circulatory collapse)
(septic; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Brain, disease
(stroke; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Meninges
(subarachnoid hemorrhage, cerebral vasospasm from; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Headache
Osteoarthritis
Pruritus
(treatment of pain assocd. with; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT Infection
(viral; anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

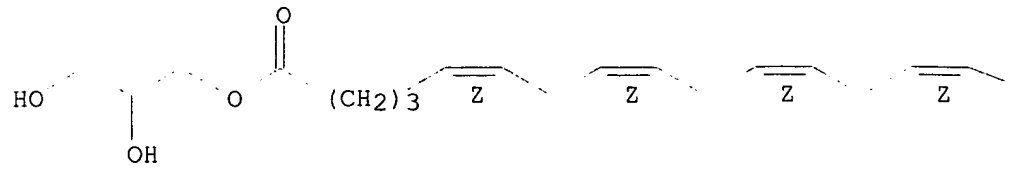
IT **35474-99-8 53847-30-6**, 2-Arachidonylglycerol
94421-68-8, Anandamide **183718-77-6**, AM 404
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

IT **35474-99-8 53847-30-6**, 2-Arachidonylglycerol
183718-77-6, AM 404
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(anandamide and structurally related lipids as vanilloid receptor modulators in relation to treatment of diseases assocd. with abnormal vanilloid receptor function)

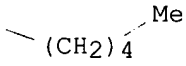
RN 35474-99-8 HCAPLUS
CN 5,8,11,14-Eicosatetraenoic acid, 2,3-dihydroxypropyl ester, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

PAGE 1-A



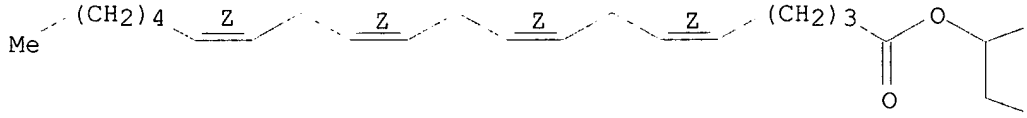
PAGE 1-B



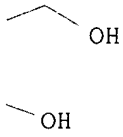
RN 53847-30-6 HCAPLUS
CN 5,8,11,14-Eicosatetraenoic acid, 2-hydroxy-1-(hydroxymethyl)ethyl ester, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



RN 183718-77-6 HCAPLUS
CN 5,8,11,14-Eicosatetraenamide, N-(4-hydroxyphenyl)-, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

PAGE 1-A

PAGE 1-B

$-(CH_2)_4$

Me

L113 ANSWER 4 OF 6 HCAPLUS COPYRIGHT 2003 ACS
AN 1996:83074 HCAPLUS
DN 124:127173
TI Transdermal adhesive preparations containing morphine and its antagonists
IN Oota, Tetsuya; Hashimoto, Michiari; Kitamura, Mikya
PA Sekisui Chemical Co Ltd, Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM A61K031-485
ICS A61K009-70; A61K047-10; A61K047-12; A61K047-16
CC 63-6 (**Pharmaceuticals**)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 07304673	A2	19951121	JP 1994-94815	19940509
PRAI JP 1994-94815		19940509		

AB The prepns. comprise a support having thereon a drug-contg. adhesive layer contg. adhesives 100, morphine acid salts 0.1-40, morphine antagonist acid salts 0.1-30, and absorbefacients 0.1-15 wt.% and the absorbefacients are .gtoreq.1 selected from (A) compds. showing logP value (index of hydrophobicity, P = partition coeff. in octanol/H2O) -0.5-2, (B) C2-8 hydroxycarboxylic acids, dicarboxylic acids, and (C) amides of C10-14 aliph. carboxylic acids with NH2CH2CH2OH or NH(CH2CH2OH)2. The prepns. sustainedly release morphine salts and have reduced adverse reaction. A silicone-coated PET parting paper was coated with a compn. contg. an adhesive (an AcOEt soln. of 2-ethylhexyl acrylate-N-vinyl-2-pyrrolidone-1,6-hexamethylene glycol dimethacrylate copolymer) 100, morphine hydrochloride (I) 33, naloxone hydrochloride (II) 10, polyoxyethylene lauryl ether 8, lactic acid 1.6, and lauric acid diethanolamide 4.9 parts using AcOEt as a solvent, dried, and the adhesive layer was transferred onto an EVA layer of a PET-EVA laminate film to give a transdermal prepn. Permeation amts. of I and II from the prepn. through a sheet of hairless mouse skin for 24 h were 4510 and 830 .mu.g, resp., vs. 90 and 25 .mu.g, resp., for a control prepn. contg. no absorbefacients.

ST morphine antimorphine transdermal prepn absorbefacient; hydroxycarboxylic acid absorbefacient morphine transdermal; dicarboxylic acid absorbefacient morphine transdermal; fatty amide absorbefacient morphine transdermal

IT Diarrhea
(inhibitors; transdermal adhesives contg. morphine salts, morphine antagonist salts, and absorbefacients)

IT Analgesics
Antitussives
(transdermal adhesives contg. morphine salts, morphine antagonist salts, and absorbefacients)

IT Carboxylic acids, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(di-, C2-8, transdermal adhesives contg. morphine salts, morphine antagonist salts, and absorbefacients)

IT Amides, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological

study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(fatty, C10-14, N-(hydroxyethyl); transdermal adhesives contg. morphine salts, morphine antagonist salts, and absorbefacients)

IT Carboxylic acids, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(hydroxy, C2-8; transdermal adhesives contg. morphine salts, morphine antagonist salts, and absorbefacients)

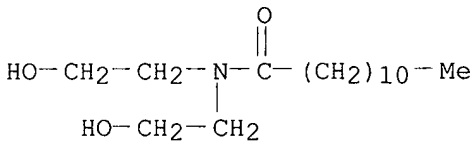
IT Pharmaceutical dosage forms
(transdermal, transdermal adhesives contg. morphine salts, morphine antagonist salts, and absorbefacients)

IT 50-21-5, biological studies **120-40-1**, Lauric acid diethanolamide 9002-92-0, Polyoxyethylene lauryl ether
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(transdermal adhesives contg. morphine salts, morphine antagonist salts, and absorbefacients)

IT 52-26-6, Morphine hydrochloride 357-08-4, Naloxone hydrochloride
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(transdermal adhesives contg. morphine salts, morphine antagonist salts, and absorbefacients)

IT **120-40-1**, Lauric acid diethanolamide
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(transdermal adhesives contg. morphine salts, morphine antagonist salts, and absorbefacients)

RN 120-40-1 HCAPLUS
CN Dodecanamide, N,N-bis(2-hydroxyethyl)- (6CI, 8CI, 9CI) (CA INDEX NAME)



L113 ANSWER 5 OF 6 HCAPLUS COPYRIGHT 2003 ACS
AN 1995:967254 HCAPLUS
DN 123:350248
TI Percutaneously absorbable plaster comprising acid-addition salt of morphine
IN Hashimoto, Michiari; Azuma, Masato; Ota, Tetsuya; Kitamura, Mikiya
PA Sekisui Chemical Co., Ltd., Japan; Dainippon Pharmaceutical Co., Ltd.
SO PCT Int. Appl., 43 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
IC ICM A61K031-485
ICS A61K009-70
CC 63-6 (**Pharmaceuticals**)
Section cross-reference(s): **1**
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9524197	A1	19950914	WO 1994-JP1935	19941117

W: CA, CN, KR, US
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

CA 2185227 AA 19950914 CA 1994-2185227 19941117
EP 748629 A1 19961218 EP 1995-900906 19941117
R: DE, FR, GB, IT
JP 07300418 A2 19951114 JP 1994-305824 19941209
PRAI JP 1994-40903 19940311
WO 1994-JP1935 19941117

AB A percutaneously absorbable plaster composed of a support and, formed on one side thereof, a pressure-sensitive adhesive layer comprises a pressure-sensitive adhesive, a drug and a percutaneous absorption accelerator, wherein the drug is an acid-addn. salt of morphine and the accelerator comprises a compd. (A) having a log P value of -0.5 to 2.0 (P being the partition coeff. of an octanol/water system). The plaster enables a pharmacol. acceptable acid-addn. salt of morphine to be released uniformly and stably for long, is excellent in percutaneous penetration, and can effectively be applied to patients with pain, **cough**, diarrhea, and so forth.

ST percutaneously absorbable plaster morphine salt

IT Diarrhea
(inhibitor; percutaneously absorbable plaster comprising acid-addn. salt of morphine)

IT Analgesics
Antitussives
Drug bioavailability
(percutaneously absorbable plaster comprising acid-addn. salt of morphine)

IT Polymers, biological studies
Rosin
RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(percutaneously absorbable plaster comprising acid-addn. salt of morphine)

IT Alcohols, biological studies
Amides, biological studies
RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(aliph., percutaneously absorbable plaster comprising acid-addn. salt of morphine)

IT Medical goods
(plasters, adhesive, percutaneously absorbable plaster comprising acid-addn. salt of morphine)

IT Terpenes and Terpenoids, biological studies
RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(polymers, percutaneously absorbable plaster comprising acid-addn. salt of morphine)

IT Pharmaceutical dosage forms
(tapes, percutaneously absorbable plaster comprising acid-addn. salt of morphine)

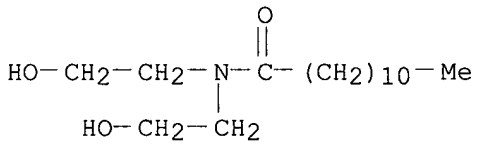
IT 50-21-5, Lactic acid, biological studies 52-26-6, Morphine hydrochloride 56-81-5D, Glycerol, hydrogenated resin esters 57-27-2D, Morphine, acid addn. salts 64-19-7, Acetic acid, biological studies 64-31-3, Morphine sulfate 71-36-3, Butanol, biological studies 71-41-0, Pentyl alcohol, biological studies 75-65-0, Tert-Butyl alcohol, biological studies 77-92-9, Citric acid, biological studies 78-83-1, Isobutyl alcohol, biological studies 79-09-4, Propionic acid, biological studies 79-10-7D, Acrylic acid, alkyl, copolymers 79-41-4D, Methacrylic acid, alkyl, copolymers 87-69-4, Tartaric acid, biological studies 88-12-0D, copolymers 88-99-3, Phthalic acid, biological studies 94-13-3, Propyl p-hydroxybenzoate 94-26-8, Butyl p-hydroxybenzoate 97-78-9, N-Laurylsarcosine 99-76-3, Methyl p-hydroxybenzoate 100-21-0, Terephthalic acid, biological studies 107-92-6, Butyric acid, biological studies 107-97-1D, Sarcosine, acyl 109-52-4, Valeric acid, biological studies 110-15-6, Succinic acid, biological studies 110-16-7, Maleic

acid, biological studies 110-17-8, Fumaric acid, biological studies 110-25-8, N-Oleylsarcosine 110-94-1, Glutaric acid 111-16-0, Pimelic acid 111-27-3, Hexyl alcohol, biological studies 111-42-2D, Diethanolamine, reaction products with aliph. monocarboxylic acids 118-61-6, Ethyl o-hydroxybenzoate 119-36-8, Methyl o-hydroxybenzoate **120-40-1**, Lauric acid diethanolamide 120-47-8, Ethyl p-hydroxybenzoate 121-91-5, Isophthalic acid, biological studies 123-51-3, Isopentyl alcohol 124-04-9, Adipic acid, biological studies 136-26-5, Capric acid diethanolamide 141-43-5D, Monoethanolamine, reaction products with aliph. monocarboxylic acids 141-82-2, Malonic acid, biological studies 142-48-3, N-Stearoylsarcosine 142-78-9, Lauric acid monoethanolamide 144-62-7, Oxalic acid, biological studies 473-81-4, Glyceric acid 505-48-6, Suberic acid 544-31-0, Palmitic acid monoethanolamide 607-85-2, Isopropyl o-hydroxybenzoate 607-90-9, Propyl o-hydroxybenzoate 2052-14-4, Butyl o-hydroxybenzoate 2421-33-2, N-Palmitoylsarcosine 4191-73-5, Isopropyl p-hydroxybenzoate 6915-15-7, Malic acid **7545-24-6**, Palmitic acid diethanolamide 7726-08-1 7781-98-8 9002-85-1, Polyvinylidene chloride 9002-88-4, Polyethylene 9002-92-0, Polyoxyethylene lauryl ether 9004-95-9, Polyoxyethylene cetyl ether 19438-10-9 25038-59-9, Polyethylene terephthalate, biological studies 27234-90-8 29656-58-4D, Hydroxybenzoic acid, alkyl derivs. 38567-05-4 53631-77-9 77201-17-3 118677-04-6
RL: DEV (Device component use); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(percutaneously absorbable plaster comprising acid-addn. salt of morphine)

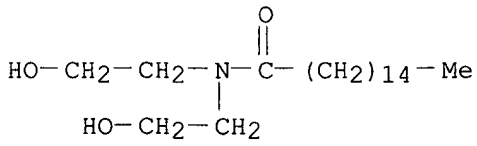
IT 7429-90-5, Aluminum, biological studies
RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(sheet; percutaneously absorbable plaster comprising acid-addn. salt of morphine)

IT **120-40-1**, Lauric acid diethanolamide **7545-24-6**, Palmitic acid diethanolamide
RL: DEV (Device component use); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(percutaneously absorbable plaster comprising acid-addn. salt of morphine)

RN 120-40-1 HCAPLUS
CN Dodecanamide, N,N-bis(2-hydroxyethyl)- (6CI, 8CI, 9CI) (CA INDEX NAME)



RN 7545-24-6 HCAPLUS
CN Hexadecanamide, N,N-bis(2-hydroxyethyl)- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



L113 ANSWER 6 OF 6 HCAPLUS COPYRIGHT 2003 ACS
AN 1994:331108 HCAPLUS

DN 120:331108
TI Chewing gum compositions
IN Szejtli, Jozsef; Puetter, Sigurd
PA MEDICE Chem.-Pharm. Fabrik Puetter GmbH und Co. KG, Germany
SO Eur. Pat. Appl., 28 pp.
CODEN: EPXXDW
DT Patent
LA German
IC ICM A23G003-30
ICS A61K009-00
CC 63-6 (**Pharmaceuticals**)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 575977	A2	19931229	EP 1993-110010	19930623
	EP 575977	A3	19950104		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	DE 4220735	A1	19940113	DE 1992-4220735	19920625
PRAI	DE 1992-4220735		19920625		

OS MARPAT 120:331108
AB A drug-contg. chewing gum has the active ingredient as a sustained-release inclusion complex with a swellable carbohydrate polymer, e.g. starch, cyclodextrin, or their derivs., which may be crosslinked. Thus, a .beta.-cyclodextrin polymer was prepd. from dimethyl-.beta.-cyclodextrin and 1,2,9,10-diepoxy-4,7-dioxadecane in the presence of BF3-Et2O. A DEAE-.beta.-cyclodextrin polymer was swelled in 50% aq. EtOH contg. 1.25% salicylic acid and dried at 105.degree.. The salicylic acid content of the product was 4.4%, of which 99% was released by extn. with buffer (pH 7.2) for 60 min and 58% by extn. with water.
ST chewing gum drug sustained release
IT Crosslinking agents
(glycerol and derivs., for carbohydrate polymers)
IT Polysaccharides, uses
RL: BIOL (Biological study)
(inclusion compds. with pharmaceuticals, sustained-release, in chewing gum)
IT Amino acids, compounds
RL: BIOL (Biological study)
(inclusion compds., with carbohydrate-polymer, sustained-release inclusion compds. with carbohydrate polymers, in chewing gum)
IT Allergy inhibitors
Analgesics
Anti-infective agents
Antiarrhythmics
Antibiotics
Anticoagulants and Antithrombotics
Antihistaminics
Antihypertensives
Antihypotensives
Antipyretics
Antitussives
Cathartics
Diuretics
Expectorants
Fungicides and Fungistats
Hypnotics and Sedatives
Inflammation inhibitors
Neoplasm inhibitors
Nervous system stimulants
Psychotropics
Tranquilizers and Neuroleptics
Vasoconstrictors
Vasodilators

Vitamins
RL: BIOL (Biological study)
(sustained-release inclusion compds. with carbohydrate polymers, in chewing gum)

IT **Bronchodilators**
(antiasthmatics, sustained-release inclusion compds. with carbohydrate polymers, in chewing gum)

IT Tooth
(disease, caries, control of, sustained-release inclusion compds. with carbohydrate polymers for, in chewing gum)

IT Anesthetics
(local, sustained-release inclusion compds. with carbohydrate polymers, in chewing gum)

IT Carbohydrates and Sugars, compounds
RL: BIOL (Biological study)
(polymers, inclusion compds. with pharmaceuticals, sustained-release, in chewing gum)

IT Pharmaceutical dosage forms
(sustained-release, chewing gum)

IT 112-67-4, Palmitoyl chloride **10147-40-7**, Dodecylsulfonyl chloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(acylation by, of .beta.-cyclodextrin polymer)

IT 154161-65-6 154161-66-7
RL: BIOL (Biological study)
(carbohydrate polymer crosslinking with)

IT 56-81-5, 1,2,3-Propanetriol, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(carbohydrate polymer crosslinking with)

IT 109-65-9, 1-Bromobutane
RL: BIOL (Biological study)
(condensation of, with .alpha.-cyclodextrin polymer)

IT 2009-83-8, 6-Chloro-1-hexanol 18162-48-6, tert-Butyldimethylsilyl chloride
RL: BIOL (Biological study)
(condensation of, with .beta.-cyclodextrin polymer)

IT 75-56-9, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with .gamma.-cyclodextrin polymer)

IT 71-43-2, Benzene, properties 106-44-5, p-Cresol, properties 108-95-2, Phenol, properties
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(sorption of, by .beta.-cyclodextrin polymer, inclusion compd. formation in)

IT 61-73-4D, inclusion compds. with .beta.-cyclodextrin polymers 69-72-7D, inclusion compds. with .beta.-cyclodextrin polymers 1837-57-6D, Ethacridine lactate, inclusion compds. with .beta.-cyclodextrin polymers
RL: BIOL (Biological study)
(sustained-release)

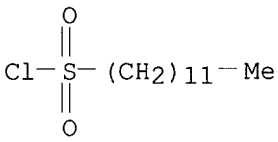
IT 50-23-7D, Hydrocortisone, inclusion compds. with carbohydrate polymers 106-89-8D, polymers with .beta.-cyclodextrin derivs., inclusion compds. with pharmaceuticals 2224-15-9D, 1,2,11,12-diepoxy-4,9-dioxadodecane copolymer, inclusion compds. with pharmaceuticals 7585-39-9D, .beta.-Cyclodextrin, derivs., polymers, inclusion compds. with pharmaceuticals 7585-39-9D, .beta.-Cyclodextrin, polymers, inclusion compds. with pharmaceuticals 9005-25-8D, Starch, derivs., inclusion compds. with pharmaceuticals 9005-25-8D, Starch, inclusion compds. with pharmaceuticals 10016-20-3D, .alpha.-Cyclodextrin, derivs., polymers, inclusion compds. with pharmaceuticals 10016-20-3D, .alpha.-Cyclodextrin, polymers, inclusion compds. with pharmaceuticals 12619-70-4D, Cyclodextrin, derivs., polymers, inclusion compds. with pharmaceuticals 12619-70-4D, Cyclodextrin, polymers, inclusion compds. with pharmaceuticals 17465-86-0D, .gamma.-Cyclodextrin, derivs.,

polymers, inclusion compds. with pharmaceuticals 17465-86-0D, .gamma.-Cyclodextrin, polymers, inclusion compds. with pharmaceuticals 153149-87-2D, inclusion compds. with pharmaceuticals 153149-89-4D, inclusion compds. with pharmaceuticals 153177-41-4D, inclusion compds. with pharmaceuticals 154095-32-6D, inclusion compds. with pharmaceuticals
RL: BIOL (Biological study)
(sustained-release, in chewing gum)

IT 75-77-4, Trimethylsilyl chloride, biological studies 999-97-3, 1,1,1,3,3,3-Hexamethyldisilazane
RL: RCT (Reactant); RACT (Reactant or reagent)
(.beta.-cyclodextrin polymer trimethylsilylation by)

IT **10147-40-7**, Dodecylsulfonyl chloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(acylation by, of .beta.-cyclodextrin polymer)

RN 10147-40-7 HCAPLUS
CN 1-Dodecanesulfonyl chloride (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



=> d his

(FILE 'HOME' ENTERED AT 13:49:37 ON 13 FEB 2003)
DEL HIS

FILE 'REGISTRY' ENTERED AT 13:50:38 ON 13 FEB 2003
ACT DONNA/Q

L1 STR

L2 STR L1
L3 SCR 1838 OR 1992 OR 2016 OR 2026 OR 2043 OR 2039 OR 2054
L4 40 S L2 NOT L3 CSS SAM
L5 8 S L4/COM
L6 SCR 1199
L7 30 S L2 NOT (L3 OR L6) CSS SAM
L8 9 S L7/COM
L9 STR L2
L10 SCR 1199 OR 1302 OR 1304
L11 15 S L9 NOT (L3 OR L10) CSS SAM
L12 5 S L11/COM
L13 10 S L11 NOT L12
L14 SCR 1199 OR 1302 OR 1304 OR 1700 OR 1812
L15 13 S L9 NOT (L3 OR L14) CSS SAM
L16 7 S L15/COM
L17 6 S L15 NOT L16
L18 STR L9
L19 2 S L18 CSS SAM
L20 STR L18
L21 4 S L20 CSS
L22 7 S (L18 OR L20) NOT (L3 OR L14) CSS SAM
L23 22 S (L18 OR L20) NOT L3 CSS
L24 21 S L23/COM
L25 QUE (L18 OR L20) NOT L3
L26 150 S L18 NOT L3 CSS FUL

```
L27             QUE L20 NOT L3
L28             SCR 1838 OR 1992 OR 2005 OR 2016 OR 2026 OR 2043 OR 2039 OR 205
L29             SCR 1929
L30          15 S L20 AND L29 NOT L28 CSS
L31         300 S L20 AND L29 NOT L28 CSS FUL
                SAV L26 JAGOE864A/A
                SAV L31 JAGOE864B/A
L32         297 S L31/COM
L33             STR L20
L34           0 S L33 CSS
L35             SCR 1848 OR 1852 OR 1855 OR 1867
L36             SCR 1199 AND 2004 AND 1992 AND 1838  AND 1199
L37             SCR 1839 OR 1993 OR 2005 OR 2016 OR 2026 OR 2021 OR 2043 OR 203
L38             SCR 1839 OR 2043 OR 2039 OR 2054 OR 2127
L39           1 S L33 AND L35 AND L36 NOT L38 CSS SAM
L40             SCR 1839 OR 2043 OR 2039 OR 2054 OR 2127 OR 1918 OR 2040 OR 205
L41           1 S L33 AND L35 AND L36 NOT L40 CSS
L42             SCR 1839 OR 2043 OR 2039 OR 2054 OR 2127 OR 1918 OR 2040 OR 205
L43           2 S L33 AND L35 AND L36 NOT L42 CSS
L44             SCR 1839 OR 2043 OR 2039 OR 2054 OR 2127 OR 1918 OR 2040 OR 205
L45           2 S L33 AND L35 AND L36 NOT L44 CSS
L46       51250 S (C3 OR C4 OR C5 OR C6)/ES AND (N AND O)/ELS AND 1/NR AND 1/NC
L47           9 S L33 CSS SAM SUB=L46
L48           6 S L47/COM
L49             SCR 1199 AND 2004 AND 1992 AND 1838
L50           9 S L33 AND L49 NOT L38 CSS SAM SUB=L46
L51           6 S L50/COM
L52         264 S L33 AND L49 NOT L38 CSS FUL SUB=L46
                SAV L52 JAGOE864C/A
L53         188 S L52/COM
L54             STR L33
L55           1 S L54 CSS SAM SUB=L53
L56             STR L54
L57           2 S L56 CSS SAM SUB=L53
L58          33 S L56 CSS FUL SUB=L53
L59          31 S L58/COM
                SAV L58 JAGOE864D/A
L60         155 S L53 NOT L58
L61             STR L33
L62          50 S L61 CSS
L63             STR L61
L64          50 S L63 CSS SAM
L65          50 S L63 NOT L44 CSS SAM
L66             STR L63
L67          50 S L66 NOT L44 CSS SAM
L68             STR L66
L69          32 S L68 NOT L44 CSS SAM
L70        3099 S L68 NOT L44 CSS FUL
                SAV L70 JAGOE864E/A
L71       37324 S L66 NOT L44 CSS FUL
                SAV TEMP L71 JAGOE864F/A
L72             STR L68
L73       40320 S L70 OR L71
L74             STR L72
L75          50 S L74 CSS SAM SUB=L73
L76       13224 S L74 CSS FUL SUB=L73
                SAV L76 TEMP JAGOE864G/A
L77             STR L74
L78        1767 S L77 CSS FUL SUB=L76
L79        1765 S L78/COM
                SAV L78 JAOGE864H/A
L80             STR
L81             STR L80
```

```
L82            0 S L80 NOT L44 CSS SAM
L83              STR L81
L84            3 S L83 NOT L44 SAM
L85              STR L83
L86            4 S L85 NOT L44 SAM
L87              STR L80
L88              SCR 1838
L89            2 S L87 AND L88 NOT L44 CSS SAM
L90       468272 S (NC2OC2 OR NCOC2 OR NC2 OR NC3 OR NC4 OR NC5 OR OC2 OR OC3 OR
L91            0 S L87 CSS SAM SUB=L90
L92            1 S L87 AND L88 NOT L44 CSS SAM SUB=L90
L93         1182 S L87 AND L88 NOT L44 CSS FUL SUB=L90
                 SAV L93 JAGOE864I/A
L94         1175 S L93/COM
L95            0 S L81 CSS SAM SUB=L94
L96           15 S L81 CSS FUL SUB=L94
L97           10 S L96 NOT (PYRIDIN? OR C24H41NO2 OR C17H31NO2)
                 SAV L94 JAGOE864J/A

     FILE 'HCAPLUS' ENTERED AT 16:45:27 ON 13 FEB 2003
L98         8410 S L26 OR L32 OR L53 OR L59 OR L79 OR L97
L99           61 S L98 AND (?COUGH? OR ANTITUSS? OR ANTI TUSS? OR AIRWAY OR BREA
                 E COUGH/CT
L100        1244 S E3+NT OR E5+NT
L101           3 S E8
                 E E5+ALL
                 E E2+ALL
L102        1407 S E4+NT
L103          15 S L98 (L) THU/RL AND L99,L100,L101,L102
L104           7 S L99 AND L101-L102
L105          32 S L98 AND (PHARMACOL? OR PHARMACEUT?)/SC,SX AND L99-L104
L106          61 S L99,L103,L104,L105
L107           2 S L106 AND COUGH?
L108           7 S L106 AND (ANTITUSS? OR ANTI TUSS? OR EXPECTOR?)
L109           7 S L107,L108
L110          54 S L106 NOT L109
                 SEL HIT RN L109

     FILE 'REGISTRY' ENTERED AT 16:52:04 ON 13 FEB 2003
L111          10 S E1-E10
L112           9 S L111 NOT C15H30O4

     FILE 'HCAPLUS' ENTERED AT 16:53:22 ON 13 FEB 2003
L113           6 S L112 AND L109

     FILE 'REGISTRY' ENTERED AT 16:53:38 ON 13 FEB 2003

     FILE 'HCAPLUS' ENTERED AT 16:55:01 ON 13 FEB 2003
```